

# **DIRECTORY OF RESEARCH STUDIES**

## **1977-84**

*Compiled by*

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**1985**

The Department of Economics & Sociology ever since its inception on the eve of establishment of the Punjab Agricultural University in 1962 carried out an organised and integrated research programme in order to provide answers to various economic and social problems facing farmers, policy makers and development workers of the State of Punjab. Some studies have also been conducted having national level application. The emphasis on quality research and efforts to inject more and more economic principles in agricultural economics research have helped the department to earn a great reputation in the professional world at the national and international level.

Visitors to the University, Government and private individuals and agencies have shown a good deal of interest in a large number of studies conducted by the Department in the fields of Farm Management, Production Economics, Resource Economics, Agricultural Marketing and Price Analysis, Agricultural Finance and Cooperation, and Agricultural Policy as well as Rural Sociology. This directory is an attempt to put, in chronological order, all the research studies including dissertations of M.Sc. and Ph.D. students of the Department from the year 1977 to 1984. We hope, it will be of help to the interested individuals and agencies in providing a ready reference to the work done in the Department

Dr H.S.Sandhu and Mr M.S.Sidhu have done this painstaking work in the minimum period of time. Suggestions from the readers will be highly appreciated.

*D.S. Sidhu*  
D.S.Sidhu 20.8.85  
Professor and Head

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DIRECTORY OF RESEARCH STUDIES  
 DEPARTMENT OF ECONOMICS AND SOCIOLOGY  
 PUNJAB AGRICULTURAL UNIVERSITY,  
 LUDHIANA FOR THE PERIOD 1977-84  
 (AS ON 1.1.1985).

A. BOOKS AND RESEARCH BULLETINS

A-1 BOOKS

| S.No. | Author(s)                   | Year | Title  | Publisher  |
|-------|-----------------------------|------|--|--|
| 1     | Deb, P.C.                   | 1977 | Liquor in green revolution setting   | Researchco, Delhi, 1977  |
| 2     | Sidhu, D.S.                 | 1979 | Price policy for wheat in India - An econometric analysis of production and marketing problems | S.Chand & Co. (Pvt.) Ltd., New Delhi pp.X+127.   |
| 3     | Sharma, K.L. & Harnek Singh | 1980 | Entrepreneurial growth and development programmes in northern India                            | Abhinav Publications, New Delhi  |
| 4     | Deb, P.C.                   | 1981 | Rural sociology: an introduction   | Kalyani Publishers, Delhi, 1981  |
| 5     | Grewal, S.S. & D.S Sidhu    | 1981 | Agricultural growth and employment shifts in Punjab  | The Birla Institute of Scientific Research, Economic Research Division, New Delhi, pp. 63. |
| 6     | Kainth, G.S.                | 1982 | Foodgrain marketing system in India - its structure and performance                            | Associated Publishing House, New Delhi, 1982   |
| 7     | Sankhayan, P.L.             | 1983 | Introduction to farm management.   | Tata McGraw Hill Publishing Co., New Delhi   |
| 8     | Deb, P.C. at.al.            | 1984 | Green revolution - an assessment.  | Beekay's Publications, Ludhiana  |



A-2 RESEARCH BULLETINS

|    |                          |      |   |   |
|----|--------------------------|------|---|---|
| 1  | Grewal, S.S.et.al.       | 1977 | Growth of Punjab agriculture: problems and prospects, 1st edition             | PAU Research Bulletin, June 1977  |
| 2  | Kaul, J.L. & P.G. Allen  | 1977 | Spatial equilibrium analysis of egg industry in USA                           | Experimental Station Bulletin, University of Massachusetts, USA. Publication No. 73, 1977 |
| 3  | Sidhu, D.S.              | 1977 | Wheat production, marketable surplus and price policy in India                | Research Bulletin, CIMMYT, Mexico   |
| 4  | Grewal, S.S. & P S Rangl | 1978 | Planning for the growth of rural economy of Punjab                            | PAU Research Bulletin.  |
| 5  | Grewal, S.S. & P S Rangl | 1978 | Underdeveloped areas in Punjab with reference to agriculture                  | PAU Research Bulletin   |
| 6  | Grewal, S.S. et.al.      | 1978 | Growth of Punjab agriculture - problems and prospects - 2nd edition           | -do-  |
| 7  | Sharma, A.C.et.al.       | 1978 | Kandi watershed and area development project, Punjab                          | Department of Forests, Govt. of Punjab, Chandigarh  |
| 8  | Grewal, S.S. & D S Sidhu | 1979 | Prosperity of Punjab farmers - reality or myth, 1st edition                   | PAU Research Bulletin   |
| 9  | Grewal, S.S. et.al.      | 1979 | Agro-climatic regions of Punjab   | -do-  |
| 10 | Chatha, I.S. & D S Sidhu | 1980 | Production and marketing of potatoes in Punjab                                | -do-  |
| 11 | Grewal, S.S. & D S Sidhu | 1980 | Prosperity of Punjab farmers - reality or myth - 2nd edition                  | -do-  |
| 12 | Sharma, A.C.et.al.       | 1980 | Problems of livestock development in the higher reaches of Dholbaha catchment | -do-  |
| 13 | Sidhu, D.S. & A J Singh  | 1980 | Agril.marketing training in India   | -do-  |

|    |                             |      |   |   |
|----|-----------------------------|------|---|---|
| 14 | Gill, K.S. &<br>D S Sidhu   | 1982 | Production and marketing problems of guar in Punjab   | PAU Research Bulletin   |
| 15 | Chatha, I.S. &<br>D S Sidhu | 1983 | Production and marketing constraints of new crops in the Punjab state .                               | -do-  |
| 16 | Grewal, S.S. &<br>P S Rangl | 1983 | An analytical study of growth of Punjab agriculture   | -do-  |
| 17 | Sidhu, D.S.                 | 1983 | Food system and food safety in India - a case study for joint FAO/WHO Expert Committee on food safety | -do-  |
| 18 | Gill, K.S. et.al.           | 1984 | Foodgrain losses at farm level in Punjab  | -do-  |
| 19 | Grewal, S.S. &<br>P S Rangl | 1984 | An analysis of wheat economy in India w.r.t. Punjab   | -do-  |
| 20 | Sidhu, D.S.                 | 1984 | An analysis of demand and supply for food stuffs in Uganda  | FAO/Ministry of Cooperative and Marketing, Kampala, Uganda/PAU 1984 |
| 21 | Sidhu, M.S. &<br>S S Grewal | 1984 | A study on migrant agricultural labour in Pb.   | PAU Research Bulletin   |

B. RESEARCH PAPERS

B.I. FARM MANAGEMENT, PRODUCTION ECONOMICS AND RESOURCE ECONOMICS

(a) Research Papers Published

| <u>S.No.</u> | <u>Author(s)</u>                | <u>Year</u> | <u>Title</u>   | <u>Publisher/Journal</u>                                     |
|--------------|---------------------------------|-------------|--|--|
| 1            | Aulakh, H.S. & G.S. Kainth      | 1977        | The dynamics of wheat production in Punjab   | The Economic Times, Feb. 29, 1977.                           |
| 2            | Dhillon, B.S. & D S Sidhu       | 1977        | Estimation of demand for nitrogenous fertilizers for the Punjab state  | Fertilizer News, April 1977                                  |
| 3            | Dhillon, B.S. & P L Sankhayan   | 1977        | An analysis of the impact of factor product prices and credit availability on the demand for fertilizer in the Punjab state          | Indian Journal of Agril. Econ. 32(4), Oct.-Dec. 1977         |
| 4            | Grewal, S.S & D S Sidhu         | 1977        | Farm incomes in Punjab: myth and realities   | Economic Affairs 22(10), Oct. 1977                           |
| 5.           | Grewal, S.S. & J. S. Chamak     | 1977        | Economics of Farming of Small farmers with owned bullocks vis-a-vis hiring of tractor services.                                      | Economic Affairs, 22(4), April 1977.                         |
| 6.           | Kumar, Balbir et.al.            | 1977        | Resource pattern and crop mix in semi-hilly areas of Punjab  | Indian Economic Journal . 25(1-3), Jan-March 1980, pp.41-48. |
| 7.           | Mann, G.S. & Karam Singh        | 1977        | Income and employment of small/marginal farmers and agricultural labourers in Punjab   | Economic Affairs 22(12), Dec. 1977                           |
| 8.           | Ramasuban, T.A. & P L Sankhayan | 1977        | Estimation of marginal value products and marginal rate of substitution from production functions based on per unit of factor prices | Agril. Situation in India 31(10), January 1977               |
| 9            | Sankhayan, P.L. & B S Dhillon   | 1977        | Application of linear programming models in Indian agriculture   | Indian Journal of Agril. Economics 32(2), April-June 1977    |

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|-----|--------------------------------|------|---|---|
| 10. | Sharma, A.C.                   | 1977 | Farm mechanisation in India   | Indian Farm Mechanisation 28(2) March 1977  |
| 11  | Sharma, A.C.                   | 1977 | Farm Mechanisation in Punjab  | Agricultural Mechanisation in Asia 8(2), Spring 1977, PP.62-64  |
| 12  | Sharma, A.C.                   | 1977 | Farm management machinery decisions   | Eastern Africa Journal of Rural Development 10(1&2), 1977, pp. 758-87.                                    |
| 13  | Sharma, A.C. & A K Gupta       | 1977 | An economic analysis of existing and normative cropping pattern for small farmer in Ludhiana district | Journal of Research, PAU, Dec., 1977, pp. 473-481.  |
| 14  | Sharma, A.C. & A S Kahlon      | 1977 | An application of systems approach to farm machinery decisions  | Symposium on Agril. Systems: Theory and Application UNDP Centre of Advanced Studies in Agril. Engg. 1977. |
| 15  | Sidhu, D.S.                    | 1977 | Resource productivity and use efficiency in Punjab agriculture  | Indian Journal of Agricultural Economics, January, 1977   |
| 16  | Singh, Balwinder               | 1977 | Mango Cultivation in Punjab   | The Economic Times, April 29, 1977.   |
| 17  | Singh, Joginder                | 1977 | Income distribution in rural sector of Pb.  | Indian Economic Journal 25(2), Oct.-Dec. 1977, pp.111-18.   |
| 18  | Singh, Joginder & Baldev Kumar | 1977 | Farm holding pattern in Punjab  | The Economic Times, Feb.9, 1977   |
| 19  | Singh, Karam & Balbir Kumar    | 1977 | A study of farmer-labour relationship in P  | Indian Journal of Industrial Relations 12(3), January 1977  |
| 20  | Singh, Tirath & Indel Sain     | 1977 | An economic analysis of fertilizer for groundnut crop in Punjab                                       | Indian Journal of Agricultural Economics 32(2), April-June 1977   |
| 21  | Singh, Tirath et. al           | 1977 | An economic analysis of irrigation and fertilizer requirements for sugarcane crop                     | Agricultural Situation in India, 1977   |

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|----|-------------------------------|------|---|--|
| 22 | Basra, B.S. & Nirmal Singh    | 1978 | Production of pulses in Punjab  | Crop Improvement 5(2), Dec. 1978, pp. 155.                       |
| 23 | Basra, B.S.et.al              | 1978 | A micro-level study of capital formation in Punjab agriculture                    | Indian Journal of Agricultural Economics 32(2), April-June 1978. |
| 24 | Gill, G.S. & Nirmal Singh     | 1978 | Pattern of employment and wage structure of annual farm servants                  | Agricultural Situation in India 33(8), Nov.1978, pp.501-03.      |
| 25 | Grewal, S.S. & A S Kahlon     | 1978 | Mechanization of Indian agriculture   | Economic Affairs 23(8-9), Sept. -Oct. 1978.                      |
| 26 | Kahlon, A.S. & Rachhpal Singh | 1978 | Tractor use by Punjab farmers   | Agricultural Situation in India 33(5), May 1978, pp.283-87.      |
| 27 | Kainth, G.S. & R K Gupta      | 1978 | The wheat acreage supply response under the changing farm programme in the Punjab | Social Sciences Research Journal 3(3), Nov. 1978.                |
| 28 | Khatra, P.S.                  | 1978 | Farm size and economic efficiency in cotton belt of Punjab                        | Economic Affairs, 23(1-2), January-February 1978.                |
| 29 | Kumar, Narinder & H K Sandhu  | 1978 | An economic analysis of saline-alkali soil in Kapurthala district of Punjab       | Economic Affairs, April 1978 pp.116-20.                          |
| 30 | Mehta, Parkash                | 1978 | Impact of working capital and adoption of cropping pattern in the Punjab state    | Indian Journal of Agricultural Economics 32(4), Oct.-Dec.1978    |
| 31 | Mehta, Parkash                | 1978 | Small farmers and rural development   | Indian Economic Journal 26(2), Oct.-Dec. 1978                    |
| 32 | Sankhayam, P.L.               | 1978 | Size of holding and productivity - a case of Punjab                               | Agricultural Situation in India, 32(12), March, 1978             |
| 33 | Sankhayan, P.L. & B R Garg    | 1978 | Allocation efficiency and the farm size   | Asian Economist 1(4), Feb.1978                                   |

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|----|-----------------------------|------|--|---|
| 34 | Sankhayan, P.L. & D S Sidhu | 1978 | Income and expenditure pattern of Punjab farmers   | The Economic Times, Feb. 21, 1978, p.3.   |
| 35 | Sharma, A.C.                | 1978 | Impact of tractorisation on production patterns, cropping intensity and farm incomes in India            | Agricultural Mechanisation in Asia 9(2), Spring 1978, pp. 49-52.  |
| 36 | Sharma, A.C. & B R Garg     | 1978 | Kandi watershed and area development project of Punjab State: an ex-ante appraisal of forestry component | Ind. Journal of Agr. Economics 33(4), Oct.-Dec. 1978, pp. 223-230.  |
| 37 | Sharma, A.C. & A K Gupta    | 1978 | Cropping patterns and their relative profitability under various farming systems in the indus-basin      | Proceedings of National Symposium on Land and Water Management in Indus-basin, Vol.II, PAU, Ludhiana      |
| 38 | Sharma, A.C. & A S Kahlon   | 1978 | An analysis of systems analysis approach to farm machinery decisions                                     | Agril. systems, Theory and Application, College of Agriculture Engg. PAU, 67-71.                          |
| 39 | Sharma, A.C. & P P Setia    | 1978 | Small farming policy choices - an application of systems analysis approach                               | Proceedings of Fifth National Systems Conference, PAU, Ldh., pp.310-312.                                  |
| 40 | Sharma, A.C. & P P Setia    | 1978 | Small farmers development agency in Ferozepur district of Punjab state                                   | News Letter ICSSR North-Western Regional Centre 1(1), Sept. 1978, pp.13-14.                               |
| 41 | Sidhu, D.S. & A J Singh     | 1978 | Diversification possibilities in Punjab agriculture  | Land and Water Management in Indus-basin Vol.II, Indian Ecological Society, ICAR and PAU, Ludhiana, 1978. |
| 42 | Singh, A.J. & K C Dhawan    | 1978 | Normative energy requirements of the existing and improved levels of technology in Punjab agriculture    | -do-  |

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|----|----------------------------|------|---|---|
| 43 | Singh, A.J. & K C Dhawan   | 1978 | Simulation of energy requirements in Punjab agriculture                                       | Agricultural Systems; Theory and Applications; College of Agr. Engg., PAU, 1978.            |
| 44 | Singh, A.J. & K C Dhawan   | 1978 | Determination of energy requirements for different levels of technology in Punjab agriculture | Agricultural Situation in India 32(10), January, 1978                                       |
| 45 | Singh, A.J. & B.S. Bhullar | 1978 | A study into agricultural production and productivity in Punjab                               | Land and Water Management in Indus-basin Vol.II, Indian Ecological Society, ICAR/PAU, 1978. |
| 46 | Singh, A.J. & J S Chamak   | 1978 | Profitability of farm business in Punjab  | -do-  |
| 47 | Singh, A.J. & S S Miglani  | 1978 | Problems of small and marginal farmers  | UGC Summer Institute, Deptt of Home Management, PAU, May-June 1978.                         |
| 48 | Singh, A.J. et. al.        | 1978 | Growth of crop output in Punjab - a component analysis  | Productivity 19(3), Oct.-Dec. 1978, pp.401-12.  |
| 49 | Singh, A.J. et. al.        | 1978 | Comparative economics of diesel engines and electric motors in Punjab                         | Winter Institute on Project Appraisal and Evaluation, PAU, 1978.                            |
| 50 | Singh, A.J. et. al.        | 1978 | Disparities in farm business income at different levels of technology in Punjab State         | Economic Affairs, 23(12), Dec. 1978, pp.450-54.   |
| 51 | Singh, Bant and H S Bal    | 1978 | Cost of production of milk in Punjab  | Agro-Industrialist; April, 1978.  |
| 52 | Bal, H.S. et. al.          | 1979 | Surplus farm labour in Punjab   | Agricultural Situation in India 33(12), March 1979  |
| 53 | Chamak, J.S. et. al.       | 1979 | Resource use efficiency in Punjab Agriculture   | Agricultural situation in India 34(4), July 1979  |

- 54 Gill, G.S. & R K Patel 1979 A study on rural change through economic planning of dairying and crop farming in Punjab 17th International Conference of Agricultural Economists at Banff, Alberta, Canada, Sept. 1979.
- 55 Gill, G.S. et. al. 1979 Impact of tractorisation on agricultural production and employment pattern in Ferozepur District, Punjab Manpower Journal, 25(3), Dec. 1979, pp.27-34.
- 56 Johar, R.S. et. al. 1979 Dynamics of farm mechanization in Punjab Journal of Business and Economics 21(1), Oct.-Nov. 1979.
- 57 Kainth, G.S. 1979 Structural and tenurial analysis of operational holdings in Punjab Agriculture and Agro-Industries Journal 12(1), Jan. 1979.
- 58 Kainth, G.S. 1979 Variation in holding size and tenancy in Pb. Society and Culture 10(1), January 1979.
- 59 Kainth, G.S. 1979 Size of holding and pattern of land tenure in India - an inter-state analysis Southern Economist 17(19), February, 1979.
- 60 Kaul, J.L. & D S Sidhu 1979 Composite weather index for response studies Symposium on Effect of Weather on Agril. Productivity, Kalyani Univ. Calcutta, Feb. 79
- 61 Khatra, P.S. & P L Sankhayan 1979 Profitability of Punjab agriculture Economic Affairs 24(10,12) Oct.-Dec. 1979, pp. 256-67
- 62 Mehta, P. et. al. 1979 Linking small scale agricultural related industry with agriculture in Punjab state Indian Journal of Agril. Econ. 34(4), Oct.-Dec. 1979.
- 63 Sain, Inder, et. al. 1979 A study into the income pattern and its disposal in Punjab agriculture Economic Affairs 23(1-2), 1979
- 64 Sharma, A.C. 1979 Decisions for stationary machine operations on medium sized peasant farms: an exercise in systems Agricultural Mechanization in Asia, 10(3), Summer, 1979, pp. 13-14.



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|----|-------------------------------|------|---|---|
| 65 | Sharma, A.C. & Parkash Mehta  | 1979 | Optimum shifts in land use in irrigated agriculture: a case study of Punjab state                                       | Proceedings of seminar on policy management aspects in land use, I.I.M. Ahmedabad, June 21-23, 1979, pp.51. |
| 66 | Sharma, A.C. & P P Setia      | 1979 | Poultry potentials on small holdings in Ghall Khurd block   | Indian Journal of Poultry Science 14 (Suppl. 1), 7th National Symposium, HAU, Hissar, Dec.8-10, 1979.       |
| 67 | Singh, A.J.                   | 1979 | Agriculture's dependence on natural resources   | Agro-Industrialist, Nov. 1979.  |
| 68 | Singh, A.J. & K K Jain        | 1979 | Prospects for diversification of P.b. agriculture   | Agri. Situation in India 34(6) Sept. 1979, pp.375-380.  |
| 69 | Singh, A.J. & et.al.          | 1979 | Inter relationship between farm size and productivity in Punjab<br>pattern of   | Eastern Economist, 272(11), March 16, 1979.   |
| 70 | Singh, A.J. et.al.            | 1979 | Changes in the cost, productivity and farm income distribution in Punjab  | Economic Affairs 24(10), Oct.-Dec. 1979, pp.287-92.   |
| 71 | Singh, A.J. et.al.            | 1979 | A study into the changes in the pattern of farm business income in Punjab   | Agro-Industrialist, July 1979.  |
| 72 | Singh, Balwinder              | 1979 | Economics of Milk production in the urban areas of Punjab with reference to Ludhiana                                    | Indian Journal of Agricultural Economics 34(4), Oct.-Dec. 1979.   |
| 73 | Singh, Bant et.al.            | 1979 | A study into the cost of milk production in P.b.  | Financing Agriculture 11(2), Oct.-Dec. 1979.  |
| 74 | Singh, Karam & Joginder Singh | 1979 | An analysis of inter-temporal and inter-regional income disparity in India: its determinants                            | Asian Economic Review 21(1-3), April-Sept. 1979, pp.31-4.   |
| 75 | Singh, Karam & P S Sandhu     | 1979 | Analysis of impact of diversification on productivity, income and employment on different categories of farms in Punjab | Financing Agriculture 11(1), April-June, 1979, pp.40-47.  |

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|----|-----------------------------|------|--|--|
| 76 | Singh, Rachhpal & W.S. Brar | 1979 | A comparison of economic and financial efficiency on different sized farms                           | Economic Affairs, 24(5-7), May-July 1979, pp.129-32.                         |
| 77 | Bal, H.S.                   | 1980 | Disparity in farm family income between rich and poor farm families in Punjab                        | PSE-Economic Analyst, 2 Dec.1980   |
| 78 | Bal, H.S. et.al.            | 1980 | Economics of milch animals and farm size analysis  | Indian Journal of Agricultural Economics 35(4) Oct.-Dec.1980, pp. 154-55.    |
| 79 | Basra, B.S. & A J Singh     | 1980 | Labour and capital inputs in farming   | Capital, 1 & 4, March 17, 1980, pp.2-5.                                      |
| 80 | Basra, B.S. & A J Singh     | 1980 | An inter-regional and inter-temporal analysis of Punjab agriculture                                  | P.S.E. Economic Analyst, 2 Dec. 1980.  |
| 81 | Dhillon, B.S. & D S Sidhu   | 1980 | An effect of capital and factor product prices on the consumption of fertilizers in the Punjab state | Agricultural Banker, 3(4), Oct. 1980.  |
| 82 | Garg, B.R. & A C Sharma     | 1980 | Least cost feed for chicks   | Poultry Guide 17(9), Sept.1980, pp; 33-40.                                   |
| 83 | Grewal, S.S. & P S Rangl    | 1980 | Economics and employment of dairying in Punjab   | Indian Journal of Agricultural Economics 35(4), Oct.-Dec. 1980, pp. 120-126. |
| 84 | Jain, K.K. & S.K.Singla     | 1980 | Economics of groundnut cultivation in Punjab   | Agro-Industrialist, April 1980.  |
| 85 | Jain, K.K. et.al.           | 1980 | Economic impact of enhanced irrigation in cotton belt of Punjab                                      | Financing Agriculture 12(4), Oct. Dec. 1980.                                 |
| 86 | Kainth, G.S.                | 1980 | Impact of new farm technology on farm produce in Punjab  | Productivity 21(3), Oct.-Dec.1980  |
| 87 | Kalita, D.R. & A C Sharma   | 1980 | Potentialities of livestock enterprises on unirrigated small farms in Fobardheng block of Assam      | Indian Journal of Agricultural Economics 35(4), Oct.-Dec.1980, pp. 164-65.   |

- 88 Kaul, J.L. & D S Sidhu 1980 Effects of weather on agricultural production an exercise in the construction of weather index Indian Econometric Society, Poona, December 1980.
- 89 Kishore, Naval & Joginder Singh 1980 Farm income disparities in different zones of Punjab PSE Economic Analyst 2, Dec.1980 pp.47-57.
- 90 Kumar, Balbir et.al 1980 Resource pattern and crop mix in semi hilly areas of Punjab Economic Affairs, 1980.
- 91 Mehta, P. & J N Singh 1980 Impact of mixed farming on economic efficiency of different farm sizes in Punjab Indian Journal of Agricultural Economics 35(4), Oct:Dec.1980
- 92 Mehta, P. & R S Prihar 1980 Interaction of agro-industries and agriculture in Punjab Eastern Economist, 1980.
- 93 Ranghi, P.S. & D S Sidhu 1980 Some socio-economic aspects of poultry farming in India Poultry Guide 17(2), Feb.1980, pp.23-30.
- 94 Sain, Inder et.al. 1980 Economic rationality in the use of Nitrogenous fertilizers for Raya crop in Punjab Economic Affairs, 25(9-10), Sept.-Oct. 1980.
- 95 Sharma, A.C. & B R Garg 1980 The least cost feed for growers Journal of Research (PAU) 17 (2), June 1980, pp.204-15.
- 96 Sharma, J.L. et.al. 1989 Potentials of farm production in the semi-hilly areas of Punjab Food Farming and Agriculture, 12(8), Sept. 1980.
- 97 Singh, A.J. & A S Kahlon 1980 Impact of technological change on income distribution Economic Affairs, 25(1-3), January-March, 1980.
- 98 Singh, A.J. & A S Kahlon 1980 New Farm technology and income distribution in Punjab Asian Economic Review 22(1-3) 1980, pp.1-13.
99. Singh, A.J. & B S Bhullar 1980 A study into the nature and impact of extension input in Punjab agriculture Indian Journal of Agricultural Economics 35(1), Jan.-March, 1980

- 88 Kaul, J.L. & D S Sidhu 1980 Effects of weather on agricultural production an exercise in the construction of weather index Indian Econometric Society, Poona, December 1980.
- 89 Kishore, Naval & Joginder Singh 1980 Farm income disparities in different zones of Punjab. PSE Economic Analyst 2, Dec.1980 pp.47-57.
- 90 Kumar, Balbir et.al 1980 Resource pattern and crop mix in semi hilly areas of Punjab Economic Affairs, 1980.
- 91 Mehta, P. & J N Singh 1980 Impact of mixed farming on economic efficiency of different farm sizes in Punjab Indian Journal of Agricultural Economics 35(4), Oct-Dec.1980
- 92 Mehta, P. & R S Prihar 1980 Interaction of agro-industries and agriculture in Punjab Eastern Economist, 1980.
- 93 Rang, P.S. & D S Sidhu 1980 Some socio-economic aspects of poultry farming in India Poultry Guide 17(2), Feb.1980, pp.23-30.
- 94 Sain, Inder et.al. 1980 Economic rationality in the use of Nitrogenous fertilizers for Raya crop in Punjab Economic Affairs, 25(9-10), Sept.-Oct. 1980.
- 95 Sharma, A.C. & B R Garg 1980 The least cost feed for growers Journal of Research (PAU) 17, (2), June 1980, pp.204-15.
- 96 Sharma, J.L. et.al. 1989 Potentials of farm production in the semi-hilly areas of Punjab Food Farming and Agriculture, 12(8), Sept. 1980.
- 97 Singh, A.J. & A S Kahlon 1980 Impact of technological change on income distribution Economic Affairs, 25(1-3), January-March, 1980.
- 98 Singh, A.J. & A S Kahlon 1980 New Farm technology and income distribution in Punjab Asian Economic Review 22(1-3) 1980, pp.1-13.
99. Singh, A.J. & B S Bhullar 1980 A study into the nature and impact of extension input in Punjab agriculture Indian Journal of Agricultural Economics 35(1), Jan.-March, 1980

|     |                            |      |   |  |
|-----|----------------------------|------|---|--|
| 100 | Singh, A.J. & B S Bhullar  | 1980 | Productivity and input use in Punjab agriculture  | PSE Economic Analyst 2, Dec. 1980.   |
| 101 | Singh, A.J. & B S Bhullar  | 1980 | Growth trends in Punjab agriculture   | Indian Journal of Agricultural Economics 35(4), Oct.-Dec.1980.                   |
| 102 | Singh, A.J. & D S Sidhu    | 1980 | Rationale of pricing and irrigation water in India  | Seminar on Economic Criteria for Fixation of Water Rates, IARI, New Delhi, 1980. |
| 103 | Singh, A.J.et.al.          | 1980 | Foodgrain production in Punjab - impact of input and output prices                                  | Eastern Economist 75(8), Augst. 1980.  |
| 104 | Singh, A.J.et.al.          | 1980 | A study into inter-regional differentials in the growth of Punjab agriculture                       | Journal Ind.Soc.of Agr.Stat. 32 (3), Dec. 1980.                                  |
| 105 | Singh, Bant & K K Jain     | 1980 | Impact of diversification of farming with dairying on income and employment opportunities in Punjab | Indian Journal of Agricultural Economics 35(4), Oct.-Dec.1980                    |
| 106 | Singh, Bant et.al.         | 1980 | A study into the cost of milk production in Pb.   | Financing Agriculture 11(3), Jan.-March 1980, pp.59-61.                          |
| 107 | Singh, Balwant et.al       | 1980 | A study into the comparative economics of milk production in urban and rural areas of Punjab state  | Indian Journal of Agricultural Economics, 35(4), Oct.-Dec.1980                   |
| 108 | Singh, Raghbir & A J Singh | 1980 | Economics of investment in organisation of extension services in agriculture                        | Indian Journal of Agricultural Economics 35(1), Jan.-March 1980                  |
| 109 | Bal, H.K.et.al.            | 1981 | Changes in size distribution of holdings in Punjab - District-wise analysis                         | Indian Journal of Agricultural Economics 36(4), Oct.-Dec.1981                    |
| 110 | Bal, H.S.et.al.            | 1981 | Income, employment and poverty among selected agricultural labour households in Punjab              | First National Conference on Social Sciences, New Delhi, Jan.12-15, 1981         |

- |     |                             |      |  |   |
|-----|-----------------------------|------|--|---|
| 111 | Bal, H.S.et.al.             | 1981 | Pattern of employment and income of agricultural labour households in central Punjab                                       | Seminar on Structure of Employment and wages in Rural India ICSSR/PAU, Ludhiana July 1-2,81 |
| 112 | Basra,B.S. & A J Singh      | 1981 | Capital formation in Punjab agriculture  | Agro-Industrialist, March 1981, pp. 4-8.  |
| 113 | Dhaliwal, R.S. & S S Grewal | 1981 | Temporal and Spatial variations in wage of agricultural labourers in Punjab  | Indian Journal of Labour Econ. 24(1-2), April-July 1981.                                    |
| 114 | Dhaliwal, R.S. & S S Grewal | 1981 | Income and employment of agricultural labourers in Punjab  | Eastern Economist, 77(24), 1981   |
| 115 | Dhillon, B.S. & D S Sidhu   | 1981 | Farm size and resource productivity in the potato growing regions in the Punjab State                                      | Journal of Research (PAU) 18(1) March 1981, pp.72-78.                                       |
| 116 | Grewal, S.S. & M S Sidhu    | 1981 | A study of migrant agricultural labour in Pb.  | Indian Journal of Labour Econ. 24(3), Oct. 1981.  |
| 117 | Grewal, S.S. & P S Rangil   | 1981 | An analysis of agrarian structure in Punjab  | Indian Journal of Agricultural Economics 36(4), Oct.-Dec. 1981, pp. 173-83.                 |
| 118 | Kainth, G.S.                | 1981 | Pattern of wage structure in rural Punjab  | Seminar on Structure of Employment and Wages in Rural India, PAU, July 1981.                |
| 119 | Kainth, G.S. & R S Bawa     | 1981 | Mechanisation of rural development- Haryana  | Capital 187 (4469), Aug.10, 1981  |
| 120 | Kalita, D.R. & A C Sharma   | 1981 | Risk efficient production plans and choice of optimum farming system for small unirrigated farms in Dargaon block of Assam | ICAR Symposium on Recent Trends in Farming Systems, HAU, Hissar, March 23-25, 1981          |
| 121 | Khatra,P.S.et.al            | 1981 | Productivity comparisons of various resources of rice cultivation in Amritsar district of Punjab                           | Food Farming and Agriculture, 13(9 & 10), March 1981, pp.123-26                             |

- 122 Sain, Inder et.al. 1981 Shifts in income and expenditure in Punjab Agro-Industrialist, Feb. 1981
- 123 Sain, Inder et.al. 1981 A study into the economics and technical efficiency in raising Raya crop in Punjab Economic Affairs 26(2), April-June, 1981
- 124 Sankhayan, P.L. 1981 Comparative growth rates of area, yield and production of sugarcane in estate and individual farms in Zambia Journal of Rural Economics and Development, Nigeria, 12(1), 1981.
- 125 Sharma, A.C. & B R Garg 1981 Least cost feed for broilers Agricultural Situation in India, 36(2), May 1981.
- 126 Sharma, A.C. & D R Kalita 1981 Alternative production strategies in the wake of risk conditions: A case study of small holdings in the Gobarthang block of Assam Proceedings of International Conference on Systems and Applications, UNESCO/ICAR, Centre of Advanced Studies, PAU, 1981, pp.9-18.
- 127 Sharma, A.C. & Nirmal Singh 1981 Income and expenditure pattern of agricultural labourers and artisans in the Dholbaha catchment of Hoshiarpur district Seminar on Structure of Employment and Wages in Rural India, PAU, July 1-2, 1981.
- 128 Singh, A.J. 1981 Impact of technological change on employment Man Power Journal 17(3), Oct.-December 1981, pp. 51-58.
- 129 Singh, A.J. 1981 Prospects for Indian agriculture Economic Affairs, 26(1), Jan.-March 1981
- 130 Singh, A.J. et.al. 1981 Punjab agriculture - inter district disparities in growth Eastern Economist, 76(1), Jan.-March 1981.
- 131 Singh, A.J. et.al. 1981 An econometric analysis of the impact of input and output price on foodgrain production in Punjab Indian Journal of Agricultural Sciences 51(8), August 1981.



- 132 Singh, J.N. & D S Sidhu 1981 Growth simulation of large sized bullock and tractor farms in the central Punjab Indian Journal of Industrial Relations 17(2), Oct. 1981, pp. 265-278.
- 133 Singh, J.N. & D S Sidhu 1981 Projecting the inter-temporal changes on differential categories of bullock operated farms in Central Punjab Journal of Research (PAU) 18(3) September 1981, pp.326-35.
- 134 Singh, Karam & K K Jain 1981 The normative land use patterns, resource allocation and tractor absorption capacity of a growing economy, a closed model approach Indian Journal of Agricultural Economics 36(2), April-June 1981.
- 135 Singh, Rachhpal. et. al 1981 Economics of farming in Punjab Eastern Economist 76(3), Jan. 16, 1981, pp.30-31.
- 136 Singh, Tirath & A J Singh 1981 Technological change and factor shares in Punjab agriculture Agro-Industrialist, Feb. 1981
- 137 Bal, H.S. 1982 Factor shares in farm income and farm inequality in Punjab Agricultural Situation in India, 37(7), October, 1982.
- 138 Gill, K.S. et. al. 1982 Area, production and yield of citrus fruits in Punjab Journal of Research (PAU), 19(3) Sept. 1982.
- 139 Grewal, S.S. & P S Rangri 1982 Wheat cultivation - economics in Punjab The Economic Times, Aug. 26, 1982.
- 140 Grewal, S.S. & P S Rangri 1982 Impact of agricultural development on farmer - Labour relationship Economic Affairs, Aug. 1982.
- 141 Grewal, S.S. & J L Sharma 1982 Regional disparities in farm costs and returns in Punjab Agricultural Situation in India, 36(2), February 1982.
- 142 Grewal, S.S. et. al. 1982 A note on factors affecting farm productivity in Punjab - an application of discriminate analysis Indian Journal of Economics 12 Part IV (247), April 1982.
- 143 Jain, K.K. et. al. 1982 Impact of improved seed technology on pulses and oilseeds (crops in Punjab) Indian Journal of Agricultural Econ. 38(3), July-Sept. 1984, pp.406-08.



|     |                                  |      |   |  |
|-----|----------------------------------|------|---|--|
| 144 | Mehta, P. &<br>J N Singh         | 1982 | Fertilizer efficiency in farm business  | Agricultural Situation in India<br>37(3), September 1982.              |
| 145 | Sandhu, H.S. &<br>John H. Foster | 1982 | Landscape sensitive planning - A benefit cost<br>assessment   | Landscape Journal 1(2), Feb.<br>1982.                                  |
| 146 | Sankhayan, P.L.                  | 1982 | Income generation and distribution pattern in<br>the farming sector of Punjab, 1975-76 to<br>1979-80. | Economic Affairs 27(7-9),<br>July-Sept. 1982.                          |
| 147 | Sharma, A.C. &<br>B R Gafg       | 1982 | Least cost feed for layers  | Poultry Guide 19(4), April<br>1982, pp. 37-44.                         |
| 148 | Singh, Surjit &<br>D S Sidhu     | 1982 | Inter-temporal changes in resource productivity<br>and economic efficiency in Punjab agriculture      | Journal of Research (PAU), 19(3)<br>Sept. 1982, pp. 248-55.            |
| 149 | Sood, Kuldip &<br>J L Sharma     | 1982 | An analysis of the dynamics of structure of<br>land holdings in the Punjab                            | Economic Affairs, 27(10-12),<br>Oct.-Dec. 1982.                        |
| 150 | Bal, H.S. et.al.                 | 1983 | Resource productivity and factor shares in<br>crop production in central districts of Punjab          | Indian Journal of Agricultural<br>Economics 38(3), July-Sept. 1983.    |
| 151 | Bal, H.S. et.al.                 | 1983 | Costs and returns from dairying with cross-bred<br>cows in relation to crop cultivation in Punjab     | Dairy Guide 5(11), Nov. 1983.  |
| 152 | Basra, B.S. &<br>Karam Singh     | 1983 | Demand for tractors in Punjab   | Agricultural Situation in India,<br>38(2), May 1983, pp.63-73.         |
| 153 | Grewal, S.S.                     | 1983 | A Rapporteur's report on factor shares in<br>Indian agriculture                                       | Indian Journal of Agricultural<br>Economics 38(3), July-Sept.<br>1983. |
| 154 | Grewal, S.S. &<br>P S Rangil     | 1983 | Stabilizing fluctuating sugarcane and sugar<br>production   | National Seminar on Sugar<br>Industry, Chandigarh, Dec. 1983           |
| 155 | Kainth, G.S. et.al.              | 1983 | Productivity of wheat at different sowing<br>periods - Farmers field experience                       | PAU Journal of Research 20(3)<br>Sept. 1983.                           |

- 156 Kalita, D.R. & A C Sharma 1983 Farm production decisions on unirrigated large sized farms under risk conditions - a case study of d Dergaon block of Assam Proceedings of National Systems Conference, N.S.C. 83 Vol. I, Vikram Sarabhai Space Centre, Trivandrum, Sept. 6-8, 1983. Agril.
- 157 Khatra, P.S. & Bant Singh 1983 Economic analysis of farm factor shares in different zones of Punjab state Indian Journal of Agricultural Economics 38(3), July-Sept. 1983, pp.34-40.
- 158 Sankhayan, P.L. 1983 Resources productivity and allocation efficiency in transforming agriculture - A case study in Zambia Journal of Research (PAU) 20(2) June 1983.
- 159 Sewak, H.L. & B S Dhillon 1983 Costs and returns structure in poultry enterprise in Punjab Poultry 20(6), June 1983. Agricultural
- 160 Singh, A.J. & K K Jain 1983 Farm planning under risk and uncertainty : an application of parametric linear programming Indian Journal of Economics 38(2), April-June 1983.
- 161 Singh, A.J. et.al. 1983 Changing economic conditions of agricultural labour households in Punjab state Economic Affairs, 28(4), Oct.-Dec. 1983.
- 162 Singh, J.N. & D S Sidhu 1983 Different categories of farm firms in the central regions of Punjab Agro-Industrialist, Nov. 1983
- 163 Singh, J.N. et.al 1983 Systems approach to simulate the cropping pattern on different categories of farms in the central Punjab Economic Affairs, 28(4), Oct.-Dec. 1983.
- 164 Singh, Joginder 1983 Economics of grape cultivation in Punjab Progressive Horticulturē 15(1-2) July 1983, pp.32-37.
- 165 Singh Joginder & I S Chatha 1983 Impact of technological advances on factor shares in Punjab agriculture Indian Journal of Agricultural Economics 38(3), July-Sept. 1983

- 166 Singh, Tirath & A J Singh 1983 Technological change and factor share in Punjab agriculture Agro-Industrialist, Dec. 1983.
- 167 Bal, H.S. et.al. 1984 Changes in the size distribution of farm holding in Punjab - district-wise analysis Agricultural Situation in India, 38(12), March 1984.
- 168 Bawa, R.S. & G S Kainth 1984 Agricultural Development, employment shifts and income distribution in north-west India Indian Journal of Regional Sciences 16(1), 1984.
- 169 Dhaliwal, R.S. & S S Grewal 1984 Impact of agricultural development on economic conditions of agricultural labourers in Punjab Journal of Research (PAU), Jan.-March 1984.
- 170 Grewal, S.S, 1984 Factor shares in Indian agriculture - Summary and group discussion Indian Journal of Agricultural Economics 39(1), Jan-March 1984.
- 171 Joshi, A.S. & A J Singh 1984 Comparative economics of different sources of irrigation in Punjab PSE Economic Analyst 5(1&2), 1984.
- 172 Kainth, G.S. & R S Bawa 1984 Cropping intensity in a developing economy - Flow, spatial disparity and determinants. The Economic Journal of Nepal, 7(3), July-Sept. 1984
- 173 Kaul, J.L. & R. Singh 1984 Impact of mixed farming on productivity, employment and requirements of inputs Productivity 24(4), 1984, pp. 519-26.
- 174 Kalita, D.R. & A C Sharma 1984 Choice of optimum farming system for unirrigated medium sized farms in Foberdhana block of Assam Journal of Research, PAU, 21(2) June 1984, pp.251-62.
- 175 Khatra, P.S. Inder Sain 1984 Economic optima in crop production Economic Affairs 29(1), Jan.-March 1984, pp.43-48.
- 176 Prihar, R.S. & D S Sidhu 1984 Impact of mechanisation on labour employment in Punjab Indian Journal of Industrial Relations, 19(3), Jan.1984, pp. 379-87.
- 177 Prihar, R.S. & D S Sidhu 1984 Labour employment pattern on different types of farms in Punjab Journal of Research (PAU), 21(2) June 1984.

|     |                                  |      |   |   |
|-----|----------------------------------|------|---|---|
| 178 | Sankhayan, P.L. & Inderpal Singh | 1984 | A comparative study of the impact of surface and lift irrigation systems on the cropping pattern, income distribution and economic efficiency on the Punjab farms | Indian Journal of Agricultural Economics 39(4), Oct.-Dec. 1984  |
| 179 | Sankhayan, P.L. & K C Sood       | 1984 | An analytical study of area, yield and production of pulses in Punjab, 1960-61 to 1980-81   | Economic Affairs 29(2), 1984.                                   |
| 180 | Sidhu, D.S. et. al.              | 1984 | An economic analysis of various sources of irrigation in Punjab.  | Indian Journal of Agricultural Economics 39(3), July-Sept. 1984 |
| 181 | Singh, Tirath & A J Singh        | 1984 | Technological change and factor shares in Punjab agriculture  | Economic Affairs, 29(4), Oct.-Dec. 1984                         |

B - Research Papers Accepted/Contributed

|   |                           |      |  |  |
|---|---------------------------|------|--|--|
| 1 | Bal, H.K. et. al.         | 1983 | Analysis of demand for farm labour and its substitution with other factors of production for agriculture     | Submitted to Agricultural Situation in India.                            |
| 2 | Bal, H.S. et. al.         | 1983 | Comparative economics of dairying with cross-bred cows and indigenous milch animals in rural areas of Punjab | Submitted to Agricultural Banker, New Delhi                              |
| 3 | Chand, Ramesh & J L Kaul  | 1984 | A note on the use of Cobb-Douglas profit function  | Submitted to American Journal of Agricultural Economics                  |
| 4 | Kalita, D.R. & A C Sharma | 1984 | Instability in crop farming business under rainfed conditions - case study of Assam plains                   | Accepted for publication in Journal of Research, Assam Agril. University |
| 5 | Kalita, D.R. & A C Sharma | 1984 | Economic rationale of diversification on medium sized unirrigated farms in Dergaon block of Assam            | -do-   |
| 6 | Prihar, R.S. & D S Sidhu  | 1984 | Tracterization, farm labour, employment, productivity and net returns  | Submitted to Agril. Mechanization in Asia, Tokyo, Japan                  |
| 7 | Sewal, H.L. & B S Dhillon | 1984 | Factor productivity and returns to scale in poultry enterprise in the Punjab                                 | Accepted for publication in Poultry, Punjab.                             |

B-II. AGRICULTURAL MARKETING AND PRICE ANALYSIS

(a) Research Papers Published

1. Gill, K.S. 1977 Marketing problems of broilers in Punjab The Economic Times, Nov., 30, 1977, pp.5
2. Gill, K.S. & D.S. Sidhu 1977 Price policy for farm inputs Journal of Research (PAU), 14 (2); June, 1977.
3. Grewal, S.S. & P.S. Ranghi 1977 Impact of input prices on foodgrain production in Punjab. Ind. Jour. of Agr. Econ. 32(3), July-September, 1977.
4. Kainth, G.S. 1977 Prices, production and marketed surplus of foodgrains in Punjab Agricultural Marketing, 20(3), Oct. 1977.
5. Ranghi, P.S. & D.S. Sidhu 1977 Economic analysis of costs and margins in Egg marketing in Punjab. Agricultural Marketing, 19(4), Jan., 1977, pp 7-12.
6. Sidhu, D.S. & Balwinder Singh 1977 Marketing of potatoes in Punjab Potato, Ed. K.S. Nandpuri, PAU, pp 42-66.
7. Sidhu, D.S. & P.S. Ranghi 1977 Distribution channels, costs and margins in egg marketing in Punjab Poultry Guide, 14(11), Nov. 1977, pp 89-93.
8. Singh, A.J. et. al. 1977 Economics of nutrition with s.r.t. Punjab State Ind. Jour. of Agr. Econ. 32(3), July-Sept. 1977.
9. Singh, Balwinder 1977 Marketable surplus of mangoes in Punjab Agril. Marketing, 20(1), April, 1977
10. Singh, Balwinder 1977 Market integration and spatial price differences in foodgrain markets of Punjab Agril. Marketing, 20(2), July, 1977.
11. Singh, Balwinder & H.K. Manmohan Singh 1977 Acreage response, economic and non-economic factors for Groundnut, Sugarcane and Potatoes in Punjab Agril. Marketing, 20(1), April, 1977

|   |      |  |   |
|---|------|--|---|
| 12. Singh, Joginder                     | 1977 | Marketing of vegetables in Punjab w.r.t. potato                              | Journal of Research (PAU), 14 (3),<br>Sept., 1977, pp 318-24.                                   |
| 13. Singh, Joginder &<br>Naginder Singh | 1977 | An analysis of economics of fruit processing<br>in Punjab - A case study.    | Agril. Marketing, 20 (1), April, 1977.  |
| 14. Gill, K.S.                          | 1978 | Planning for production and marketing of<br>quality wheat                    | Seminar on Wheat Consumers Need by<br>FCI and Wheat Associate (USA),<br>New Delhi, March, 1978. |
| 15. Gill, K.S. et. al.                  | 1978 | Marketing infrastructure for agril. development                              | In P Research Bulletin 'Planning<br>for the growth of Rural Economy<br>of Punjab, Feb. 1978.    |
| 16. Grewal, S.S. et. al.                | 1978 | Marketing problems of sugarcane  | Asian Economist, 1 (10), June, 1978<br>pp. 11-15.   |
| 17. Kainth, G.S.                        | 1978 | Impact of price movements in area under selected<br>crops in Punjab          | Agricultural Marketing, 20 (4),<br>Jan., 1978.  |
| 18. Kainth, G.S.                        | 1978 | Marketed surplus of foodgrain in Amritsar distt.                             | The Economic Times, April 18, 1978  |
| 19. Khatra, P.S. & B.S. Bhullar         | 1978 | Parity between fertilizer and product price<br>needed                        | Agro-Industrialist, 9 (4), April 1978,<br>pp 3-5.   |
| 20. Sidhu, D.S.                         | 1978 | Price responsiveness of Punjab wheat yield                                   | Ind. Jour. of Agr. Econ. 33 (2), April-<br>June 1978, pp. 56-61.                                |
| 21. Sidhu, D.S.                         | 1978 | Production and marketed surplus of wheat with<br>special reference to Punjab | Wheat Research in India-1966-76,<br>ICAR, New Delhi, pp 208-215.                                |
| 22. Singh, Balwinder                    | 1978 | Market integration among the mango trading<br>firms.                         | Agril. Marketing, 21 (1) April, 1978.   |
| 23. Singh, Balwinder                    | 1978 | Losing fruits of labour  | The Economic Times, 18 (56), April, 1978.   |
| 24. Singh, Joginder                     | 1978 | Marketing of vegetables in Punjab with special<br>reference to Potato        | Journal of Research (PAU), 15 (3),<br>Sept., 1978.  |

|                                    |      |   |   |
|------------------------------------|------|---|---|
| 25. Bal, H.S. et. al.              | 1979 | Disparaty quantum of production, marketed surplus and product prices received by Punjab farmers         | Agril. Marketing, 22, Oct., 1979  |
| 26. Chatha, I.S. & J.L. Kaul       | 1979 | A study into the marketing margins of potato crop in Punjab   | Ind. Jour. of Agr. Econ. 34 (4) Oct.-Dec., 1979                             |
| 27. Satya, M.R. & K.S. Gill        | 1979 | Marketable surplus and disposal of paddy by Bara district farmers of Nepal.                             | Agril. Marketing, 22(1), April, 1979.                                       |
| 28. Sidhu, D.S. & P.S. Ranghi      | 1979 | Price spreads in egg industry in the Punjab   | Ind Jour. of Agr. Econ., 34 (4), Oct.-Dec. 1979.                            |
| 29. Singh, Balwant                 | 1979 | Seasonal variations in marketed surplus and price of milk in rural and urban areas of Punjab            | Ind. Jour. Agr. Econ. 34 (4), Oct.-Dec. 1979.                               |
| 30. Singh, Bant et. al.            | 1979 | Production and pattern of disposal of milk in rural punjab  | Agr. Marketing, 22(3), Oct., 1979.  |
| 31. Singh, Joginder                | 1979 | An anaysis of fruit and vegetable processing projects of Ludhiana district                              | Agril. Marketing, 22(2), July, 1979   |
| 32. Singh, Joginder & Harjit Singh | 1979 | Price spread based on major marketing decisions for potato growers in Punjab                            | Ind. Jour. of Agr. Econ. 34 (4), Oct.-Dec. 1979.                            |
| 33. Singh, R. and Balwinder Singh  | 1979 | Time and labour constraints in foodgrain market structure in Punjab                                     | Agril. Marketing, 22(1), April, 1979.                                       |
| 34. Gill, K.S.                     | 1980 | Importance of marketing training at farm and market level   | Seminar 'Agri. Marketing Training' FAO/PAU, Oct. 13-15, 1980.               |
| 35. Gill, K.S.                     | 1980 | Dynamics of wheat production and marketing  | Seminar Wheat Consumer; Need, FCI, Wheat Associates, New Delhi, April 1980. |
| 36. Kainth, G.S.                   | 1980 | Impact of state intervention in marketing   | Yojna, 24 (7), April 16, 1981   |
| 37. Kainth, G.S. & Balbir Singh    | 1980 | Pricing efficiency in foodgrain Marketing system- the nature of spatial and temporal price relationship | Agril. Marketing, 23(1), April, 1980.                                       |



- |                                      |      |  |   |
|--------------------------------------|------|--|---|
| 38. Kaul, J.L. & H.K. Jain           | 1980 | A spectral analysis of production and prices of potato crop                                    | Agril. Marketing, 22(3), Jan. 1980<br>pp 5-12.    |
| 39. Kaul, J.L. & H.K. Jain           | 1980 | A dynamic analysis of potato markets in Punjab-A Study of multiplier and dynamic discrepancies | Agril. Marketing, 23(3), Nov. 1980<br>pp.15-20.   |
| 40. Sidhu, D.S.                      | 1980 | Price structure and price spreads in potatoes in Punjab  | Agril. Situation in India, Sept. 1980, pp.461-65. |
| 41. Sidhu, D.S. & A.J. Singh         | 1980 | Terms of trade and economic development in India   | Ind. Jour. of Agr. Econ. 35(1), Jan-March, 1980.  |
| 42. Singh, A.J. et. al.              | 1980 | A study into the inter-temporal and inter size price differentials                             | Agril. Marketing, 23(1), April, 1980.             |
| 43. Singh, Balwinder & D.S. Sidhu    | 1980 | Price structure and price spreads in potatoes in Punjab  | Agril. Situation in India, 35(6), Sept. 1980      |
| 44. Singh, Bhupinder et. al.         | 1980 | Price spreads for wheat and paddy in Punjab  | Ind. Jour. of Agr. Econ. 35(1), Jan-March, 1980.  |
| 45. Singh, Bhupinder et. al.         | 1980 | A study into price spreads for wheat and paddy in India  | Agril. Marketing, April, 1980.                    |
| 46. Singh, Harjit and Joginder Singh | 1980 | Economics of major marketing operations of potato in the Punjab State                          | Journal of Research (PAU), 17(1) March, 1980.     |
| 47. Talugtar, K.C. et. al.           | 1980 | Price policy for farm products in Punjab   | Journal of Research (FAU), 17(1) March, 1980      |
| 48. Gill, K.S.                       | 1981 | Post-harvest marketing behaviour for wheat and paddy   | Seminar Comilla, Bangladesh, Feb. 2-5, 1981.      |
| 49. Gill, K.S. & Darbara Singh       | 1981 | Marketed surplus and pattern of marketing of important crops in Punjab                         | Agril. Marketing, 24(2), July 1981                |
| 50. Gill, D.S. and G.S. Gill         | 1981 | An economic analysis of potato marketing in Punjab   | Agril. Marketing, 24(2), July, 1981<br>pp. 25-32. |



|  |      |  |   |
|--|------|--|---|
| 51. Sidhu, D.S. & A.J. Singh           | 1981 | Prospects for farm level storage in India  | Seminar Farm level Post-harvest Technology, IARI, Jan.1, 1981                               |
| 52. Singh, A.J. & D.S. Sidhu           | 1981 | A study into the potentials for export of fruits and vegetables from Punjab to Delhi and other markets   | Agril. Marketing, 23(4), 1981, pp 13-15.  |
| 53. Singh, Balwinder                   | 1981 | Impact of focal points on marketing of farm produce  | Kurukshetra, 29(14), April, 1981  |
| 54. Singh, Balwinder                   | 1981 | Production and pattern of disposal of milk in rural Punjab   | Agril. Marketing, 24(1); April, 1981  |
| 55. Singh, Joginder & I.S. Chatha      | 1981 | Impact of variable price structure on farm income distribution in the Punjab   | Ind. Jour. of Agr. Econ. 35(4), Oct.-Dec. 1981.   |
| 56. Chatha, I.S. & J.L. Kaul           | 1982 | A Study into the price behaviour and marketing margins of potato in Punjab   | Agril. Marketing, 25(1), April, 1982.   |
| 57. Gill, K.S.                         | 1982 | Minimising losses and cost of procured foodgrains  | National Workshop 'Productivity in Public Distribution System' New Delhi, Aug. 11-12, 1982. |
| 58. Gill, K.S. & D.S. Sidhu            | 1982 | Advances in farm technology and role of warehouses   | International warehousing conference, Delhi, Nov. 3-6, 1982                                 |
| 59. Gill, K.S. et. al.                 | 1982 | Feasibility of co-operative sale by citrus growers in Punjab   | Co-operative Perspective, 17(1) April, 1982.  |
| 60. Khattri, P.S. and Jagdish C. Kalha | 1982 | Optimum resource mix for a public sector milk product plant in North-Western India.  | Asian Journal of Dairy Research, 1(3-4), July-Dec. 1982, pp. 218-26.                        |
| 61. Singh, Balbir et. al.              | 1982 | Temporal flow of marketing surplus in wheat in Amritsar district   | Agril. Situation in India, 36(6), Sept. 81.   |
| 62. Singh, Balwinder & O. Okereke      | 1982 | An analytical appraisal of market margin of processed Palm Oil and palm kernels in the Nsukka Local Government area of Anambra State in Nigeria. | Agril. Marketing, 25(2), July, 1982.  |

|                                       |      |  |  |
|---------------------------------------|------|--|--|
| 63. Gill, K.S.                        | 1983 | Market structure and agricultural development  | Seminar on Changing Structure of Agr. Markets in India, Institute of Development Studies, Mysore, May, 1983. |
| 64. Gill, G.S. & R.K. Patel           | 1983 | Milk production and disposal pattern in rural Punjab   | Asian Journal of Dairy Research, 2(1), 1983, pp 50-54.   |
| 65. Grewal, S.S.                      | 1983 | Farming in India-Price policy and farmers Income   | The Economic Times, 23(145), July 27, 1983.  |
| 66. Johl, B.S. and B.S. Dhillon       | 1983 | A study of production, marketable surplus and price behaviour of eggs in Punjab State  | Poultry Guide, 20(1), Jan. 1983.   |
| 67. Chatha, I.S. & D.S. Sidhu         | 1984 | Marketing of kharif pulses in Punjab   | Agril. Marketing, Jan., 1984.  |
| 68. Dhillon, B.S. et. al.             | 1984 | A study into price spreads in eggs in the Punjab State   | Poultry Guide, 21(11), Nov. 1984   |
| 69. Kainth, G.S.                      | 1984 | Market arrival and price behaviour of apple in Amritsar  | Agril. Marketing, 27(1), April, 1984.  |
| 70. Khattrra, P.S.                    | 1984 | Economic parameters of public sector milk marketing in North-Western India-An Application of Analytical, Numerical and Simulation Techniques | Ind. Jour. of Agr. Econ. 39(3), July-Sept. 1984, pp. 214-22.   |
| 71. Khattrra, P.S. & Jagdish C. Kalra | 1984 | Product mix optimisation   | Productivity, 25(2), July-Sept. 1984, pp. 167-77.  |
| 72. Singh, A.J. & Balwant Singh       | 1984 | An analytical study into demand and supply projections for eggs in India   | Poultry Guide, 21(3), March 1984, pp. 43-51.   |
| 73. Singh, A.J. & Balwant Singh       | 1984 | A study into factors affecting demand and supply of eggs in India.   | Poultry Guide 21(4), April, 1984 pp. 65-71.  |
| 74. Singh Bant, et. al.               | 1984 | Production and Marketing of milk in Rural Areas of Punjab  | Ind. Jour. of Agr. Econ. 39(4), Oct.-Dec. 1984.  |

75. Singh, Joginder & I.S. Chatha 1984 Impact of variable price structure on farm income disparities. Agril. Situation in India, 38(11), Feb., 1984.

b) Research Papers Accepted/Contributed

1. Chahal, S.S. & K.S. Gill 1984 Scope of tomato processing industries in Punjab - Accepted for publication in Journal of Research (FAU)
2. Chahal, S.S. & K.S. Gill 1984 Structure of tomato prices in Punjab Submitted to Agril. Marketing
3. Chahal, S.S. & Gill, K.S. 1984 An analytical study of costs and margins in marketing of eggs in Punjab Accepted for publication in Poultry Punch
4. Chand, Ramesh, P. Kumar 1984 Determinants of output supply in green revolution in India- a profit function Submitted to Indian Journal of Agr. Econ.
5. Chatha, I.S. et. al. 1984 Mechanisation of marketing operations in Punjab Submitted to Agril. Marketing
6. Gill, K.S. et. al. 1984 Marketable surplus and its disposal by the citrus growers in Punjab Accepted for publication in Journal of Research, FAU.
7. Gill, K.S. et. al. 1984 Price spreads in vegetables in Punjab Submitted to Agril. Marketing
8. Okereke, O. and Balwinder Singh 1984 An appraisal of maize storage, transportation and processing problems in Nigeria with special reference to Nsukka local government area of Anambra state Accepted for publication in Journal of Research (FAU)
9. Okpalu, P.I. & Balwinder Singh 1984 An analysis of marketing of vegetables (tomato and okra) in Abakilike local government area of Anambra state Accepted for publication in Nigerian Journal of Economic Development
10. Singh, Balwinder & E J Chikwe 1984 A study of major problems in the marketing of yam, maize and cassava in Ikewere local government area of Nigeria. Accepted for publication in Agril. Marketing.
11. Singh, Jagrup et al. 1984 An analysis of government intervention in foodgrain markets. Submitted to the Indian Economic Journal

### B.III. AGRICULTURAL FINANCE AND COOPERATION

#### a) Research Papers Published

1. Lal, M. & Balwinder Singh 1977 A study into the functioning of cooperative marketing societies in Punjab with special reference to Ludhiana district Cooperative Perspective, 2(4) March 1977
2. Sandhu, H.K. 1977 Regional Rural Banks In Twenty Point Economic Programme, ed. Gupta, R.Z. Anand Publishers, New Delhi, pp.109-16.
3. Gill, J.S. & Joginder Singh 1978 Impact of credit on production pattern and incomes of small farmers in Punjab Ind. Jour. of Agr. Econ. 33(4), Oct.-Dec. 1978.
4. Grewal, S.S. & P.S. Rangi 1978 An analytical study of cooperative credit in Punjab Ind. Jour. of Agr. Econ. 33(4), Oct.-Dec. 1978
5. Sharma, A.C. & A.K. Gupta 1978 Normative, medium and short term credit requirements of Ludhiana farmers Journal of Research (PAU), 15(3), Sept. 1978, pp.323-29.
6. Sharma, A.C. & P.P. Setia 1978 Adequacy of credit flow to small and very small farmers through small farms development agency. Ind. Jour. of Agr. Econ. 33(4), Oct.-Dec. 1978.
7. Singh, A.J. & K.C. Dhawan 1978 Sources of Utilization and Productivity of agr. credit in Ludhiana district of Punjab Ind. Jour. of Agr. Econ. 33(4), Oct.-Dec. 1978
8. Singh, A.J. et. al. 1978 Impact of short-term credit on adoption of improved technology in Punjab agriculture Ind. Jour. of Agr. Econ. 33(4), Oct.-Dec., 1978.
9. Singh, Gurbachan & Balwinder Singh 1978 Pattern of voluntary savings in India Savings and Development 2(3) 1978.
10. Singh, Karam and Bhupinder Singh 1978 Agricultural credit in a developing economy - flow of special disparity & its determinants Ind. Jour. of Agr. Econ. 33(4), Oct.-Dec. 1978.
11. Singh, Prabhjit & Gurbachan Singh 1978 A study into the pattern of distribution of institutional credit among different categories of farmers Financing Agriculture, 10(3), Oct.-Dec., 1978.

- |  |      |  |  |
|--|------|--|--|
| 12. Bal, H.S. & Bant Singh             | 1979 | Indebtedness among agricultural labourers in Ludhiana district.                        | Agricultural Situation in India, 37(7), Oct., 1979.  |
| 13. Garg, et. al.                      | 1979 | Cash flow analysis of a 1000 laying hens unit  | Ind. Jour. of Poultry Science, 14 (Supp) Abstract of National Symposium, HAU, Hissar, Dec. 8-10, 1979.                       |
| 14. Kahlon, A.S. & S.S. Grewal         | 1979 | Farm indebtedness in Punjab  | Seminar Volume, Gujarat Agril. Univ. Junagarh 1, 1979.   |
| 15. Kainth, G.S.                       | 1979 | Estimation of demand for credit in a growing economy- The Punjab case                  | Indian Cooperative Review, 16 (3), April, 1979.  |
| 16. Kainth, G.S.                       | 1979 | Emerging Pattern of Cooperative credit in Punjab                                       | The Indian Journal of Economics, 59(235), April, 1979.   |
| 17. Khattri, P.S. et. al.              | 1979 | An analysis of farm indebtedness in Punjab   | Journal of social and Economic Studies, 7(2), 1979, pp. 289-96.  |
| 18. Sandhu, H.K.                       | 1979 | Rural Banks--A crash programme   | In Improvement of Management Practices of Rural Families for the Development of Agri." Giani Printing Press, Ludhiana, 1979. |
| 19. Singh, A.J. et. al.                | 1979 | Critical appraisal of credit problems of small farmers in Punjab State                 | Agricultural Banker, April-June 1979   |
| 20. Singh, A.J. et. al.                | 1979 | An analytical study into farm family saving in Punjab                                  | Indian Economic Journal, Conference Number, Dec. 1979.   |
| 21. Singh, Gurbachan & Deepinder Mohan | 1979 | Cost of borrowing of institutional credit to small and marginal farmers in Punjab      | Savings and Development, 3(2), 1979  |
| 22. Singh, Harjit & B.S. Dhillon       | 1979 | Impact of credit on employment in the integrated rural development programme in Punjab | Agricultural Banker, 2(3), July-Sept., 1979  |
| 23. Singh, Harjit & B.S. Dhillon       | 1979 | Estimation of credit gap in IRDP area of Punjab  | Financing Agriculture, 11(3), Oct.-Dec. 1979   |

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|---------------------------------------|------|--|--|
| 24. Sandhu, H.K. & Kamaljit Singh     | 1980 | An economic analysis of overdues in Kapurthala district of Punjab                        | Financing Agriculture, 11(4), Jan.-March, 1980.            |
| 25. Sandhu, H.K. & Kamaljit Singh     | 1980 | An economic analysis of cooperative finance and its overdues in the Kapurthala district. | Indian Co-op. Review, April, 1980.                         |
| 26. Sharma, A.C. and P.S. Setia       | 1980 | Time and cost of loans for pumping sets/tubewells for small holdings.                    | Agril. Mechanisation in Asia 11(2). Spring 1980, pp 57-60. |
| 27. Sharma, A.C. and Tarsem Singh     | 1980 | Rural indebtedness and its causes in the maize zone of Hoshiarpur district               | PSE Economic Analyst, 2, Dec. 1980, 80-81.                 |
| 28. Sidhu, D.S.                       | 1980 | Role of credit and input-output prices on the fertilizer consumption.                    | Agril. Banker, 3(4), Oct. 1980, pp, 9-12.                  |
| 29. Singh, A.J. & S.S. Sidhu          | 1980 | Development and working of primary agril. cooperative societies in Punjab                | Cooperative Perspective, 15(1), April-June, 1980.          |
| 30. Chand, Ramesh & D.S. Sidhu        | 1981 | Distribution of agril. credit and concentration of overdues in Punjab                    | Financing Agriculture, 13(2), April-June, 1981, pp. 18-20. |
| 31. Khattra, P.S. and B.S. Bhullar    | 1981 | Farm finance in relation to demand for chemical fertilizers in Punjab State              | Financing Agriculture, 13(3), July-Sept. 1981, pp. 31-34.  |
| 32. Singh, Gurbachan                  | 1981 | Bank credit and rural development  | Eastern Economist, 77(1), July 3, 1981.                    |
| 33. Vashisht, S.K. and Joginder Singh | 1981 | Distribution and utilisation of short term cooperative credit in Hoshiarpur district     | Ind. Cooperative Review, April, 1981, pp. 244-57.          |
| 34. Jindal, Usha, et. al.             | 1982 | Saving behaviour of rural and urban families in Punjab.                                  | Journal of Research (PAU), 19(2) June, 1982, pp. 107-12.   |
| 35. Savita, et. al.                   | 1982 | A study of saving pattern of farm and non-farm families in Ludhiana district             | Economic Affairs, 27(1-3), 1982, pp. 301-07.               |
| 36. Savita, et. al.                   | 1982 | Saving behaviour of rural and urban families in Ludhiana district                        | Journal of Research (PAU), 19(2) June, 1982.               |

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| 37. Singh, A.J. & Gurpreet Singh     | 1982 | Saving behaviour of cultivators in India with special reference to the Punjab State                    | Seminar on Economic Development, North-West India, GNDU, ASR. April, 1982. |
| 38. Singh, Balwant & Gurbachan Singh | 1982 | Analysis of mounting overcharges in primary agricultural credit societies of Punjab State              | Agricultural Banker, 5(4), Oct.-Dec., 1982.                                |
| 39. Singh, Harjit & Joginder Singh   | 1982 | Estimation of capital and credit requirements for major marketing operations of potato in Punjab State | Financing Agriculture, 14(1), Jan.-March 1982, pp.41-45.                   |
| 40. Singh, Joginder & J.S. Gill      | 1982 | Analysis of the impact of credit on small credit farmers   | Productivity, 33(3), Oct.-Dec. 1982, pp.312-18.                            |
| 41. Vashisht, S.K. & Joginder Singh  | 1982 | Operational problems of cooperative agril. service societies   | Cooperative Perspective, 16(4), Jan.-March 1982, pp.51-55.                 |
| 42. Kumar, Narinder & A.J. Singh     | 1983 | Evaluation of dairying project   | Agril. Banker, 6(2), April-June, 1983.                                     |
| 43. Singh, Balwant & Gurbachan Singh | 1983 | An evaluation of agril. credit societies in Punjab   | Agricultural Banker, 6(3), Oct.-Dec. 1983.                                 |
| 44. Singh, Jagrup & D.S. Sidhu       | 1983 | Pattern of deposit mobilisation by primary cooperatives in Punjab State- A case study                  | Ind. Cooperative Review, 20(4), April, 1983.                               |
| 45. Singh, Jagrup & D.S. Sidhu       | 1984 | Credit distribution by primary cooperatives in Punjab State- A case study                              | Ind. Cooperative Review, 21(4), April, 1982.                               |

(b) Research Papers Accepted/Contributed

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|-------------------------------|------|---|--|
| 1. Bal, H.S. et. al.          | 1983 | A study into the performance of central cooperative banks in Punjab State                         | Accepted for publication in Agril. Banker. |
| 2. Chand, Ramesh & D.S. Sidhu | 1984 | Characteristics of defaulters of agricultural credit in Punjab- A discriminant function approach. | Submitted to Land Bank Journal             |
| 3. Singh, Gurbachan et. al.   | 1984 | A study on repayment performance of borrowers in Punjab   | Submitted to Financing Agriculture.        |



#### B.IV. AGRICULTURAL POLICY AND OTHER UNCLASSIFIED ECONOMIC STUDIES

##### Research papers published

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|----|--------------------------------|------|--|---|
| 1  | Grewal, S.S. & Balwinder Singh | 1977 | Agricultural production in perspective   | Economic Review, 1977   |
| 2  | Gupta, T.R. & Gurbachan Singh  | 1977 | Some economic and social aspects of changes in the distribution of land in rural India, 1953-54 to 1971-72 | Q. Jour. of International Agriculture, March-April, 1977                                  |
| 3  | Kaul, J.L. et al.              | 1977 | An economic analysis of nutrition problem in India   | Ind. Jour. of Agr. Econ. 32(3), July-Sept, 1977, pp 67-71.                                |
| 4  | Miglani, S.S. & A.J. Singh     | 1977 | Problems and prospects for biogas plants   | Journal of Home Scienc, 2(2), June, 1977  |
| 5  | Sandhu, H.K. & J.K. Dhesi      | 1977 | The economic contribution of women to agricultural development   | Journal of Research (PAU), 14(1), March, 1977, pp 96-100.                                 |
| 6  | Singh, A.J.                    | 1977 | Problems and prospects of small and marginal farmers   | National seminar on 'New Farm Technology and Extension Strategy for Small Farmers', 1977. |
| 7  | Singh, Gurbachan, & T.R. Gupta | 1977 | Future pattern and potentials of the rural Economy of Punjab   | Report of seminar on Perspective Planning in Agril., PAU, April 7-8 1977.                 |
| 8  | Singh, Karam & Rajinder Sondhi | 1977 | Institutional growth and disparities in a growing economy - the Punjab                                     | April - Mechanisation in Asia, 2 Spring, 1977.  |
| 9  | Dhillon, B.S. & Karam Singh    | 1978 | Scope of land reforms limited - Industrialise rural India  | The Economic Times, March 7, 1978   |
| 10 | Gill, K.S. et al.              | 1978 | Infrastructure for agricultural development with special reference to marketing of inputs and output       | PAU Research Bulletin, Planning for the Growth of Rural Economy of Punjab.                |



- 11 Grewal, S.S. 1978 Facts that make sugar bitter Asian Economist, 1(10), June, 1978, pp 11-15.
- 12 Kahlon, A.S. & A.J. Singh 1978 Need for balanced growth of Punjab Economy State Planning Board, Punjab, Chandigarh, 1978.
- 13 Lobana, K.S. & Tirath Singh 1978 Role of oilseeds in our economy Ind. Oilseed Journal, 8, 1978.
- 14 Sain, Inder et al. 1978 A study into the income pattern and its disposal in the Punjab Agriculture Economic Affairs, 23(1-2), Jan-March, 1978.
- 15 Sharma, A.C. & K.N. Duggal 1978 Sectoral planning of agriculture : a systems planning approach. Proceedings 5th National System Conference Part 3, PAU, Ludhiana, Sept, 1978, pp 132-135.
- 16 Sidhu, D.S. 1978 Towards stability of the agro-economic systems Land and Water Management in Indus-Basin (India), Ind. Ecological Society, 1978
- 17 Singh, A.J. 1978 Population pressure and agricultural development Land and Water Management in Indus-Basin-III, Indian Ecological Society, ICAR/PAU, 1978.
- 18 Singh, A.J. & Chuni Lal 1978 Growth and performance of public sector enterprises in India Southern Economist, 17(2), May 15, 1978.
- 19 Singh, A.J. et al. 1978 Growth of crop output in Punjab - A component analysis Agril. Situation in India, 33(6), Sept, 1978.
- 20 Singh, A.J. et al. 1978 A study into the regional imbalances in the growth of Punjab economy News Bulletin, ICSSR, Punjab University, Chandigarh, March 3-4, 1978.
- 21 Sandhu, H.K. 1979 Demand, desires and attitudes In "Improvement of managerial practices of Rural Families for the Development of Agril.", Giani Printing Press, Ludhiana, 1979.

- 22 Sandhu, H.K. 1979 Consumer Education In "Improvement of Managerial Practices of Rural Families for the Development of Agril.", Giant Printing Press, Ludhiana, 1979.
- 23 Sandhu, H.K. 1979 Role of consumer education in buying agricultural goods for rural families -do-
- 24 Sandhu, H.K. 1979 Inter-relationships among concepts in home management -do-
- 25 Sharma, A.C. 1979 Mechanisation of Indian agriculture : Obstacles and prospects Indian Book Chronicle, 4(12), June 16, 1979, pp 215-17.
- 26 Sidhu, D.S. & A.J. Singh 1979 Domestic terms of trade and economic development in India Ind. Jour. of Agr. Econ. 34(4), Oct-Dec, 1979, pp 104-113.
- 27 Singh, A.J. & B.S. Bhullar 1979 Regional imbalances in the growth of Punjab economy Seminar "Regional Development" North-West Centre ICSSR, March, 1979
- 28 Singh, A.J. & B.S. Bhullar 1979 Trends in agricultural wages in Punjab 1979 National Seminar on Agrarian Relations, JNU, 1979.
- 29 Singh, A.J. et al. 1979 Prospects for agricultural taxation in India with special reference to Punjab State Southern Economist, March 17, 1979, pp 23-26.
- 30 Singh, Joginder et al. 1979 Taxing the farm sector in India Economic Affairs, (3-7), May-July, 1979, pp 149-52.
- 31 Bal, H.S. 1980 Regional imbalances in farm family incomes in Punjab Agril. Situation in India, 35(8), Nov, 1980.
- 32 Dhillon, P.K. & K.S. Gill 1980 Income and employment in various sector of economy Yojna, 24(19), Oct, 1980.

- 33 Grewal, S.S. & D.S. Sidhu 1980 Rapid progress in agriculture, industry lags Commerce, 141(3628), 1980, pp 284-86
- 34 Grewal, S.S. & P.S. Rangi 1980 Imbalances in growth of Punjab agriculture PSE Economic Analyst 2, Dec, 1980.
- 35 Kahlon, A.S. & S.S. Grewal 1980 Integrated rural development in Punjab - A case study Productivity News 2(11,12), Jan-Feb, 1980.
- 36 Sandhu, H.S. 1980 Small scale methane plant-problems and prospects New England Farmer, March, 1980.
- 37 Singh, A.J. 1980 Population pressure and agricultural development Manpower Journal, 16(1), Jan-March, 1980, pp 67-68.
- 38 Singh, A.J. 1980 Labour absorption in Indian agriculture with special reference to Punjab Manpower Journal, 16(2), April-June, 1980.
- 39 Singh, A.J. & Harjinder Singh 1980 A study into industrial focal points in Punjab PSE Economic Analyst 2, Dec, 1980.
- 40 Singh, A.J. & K.K. Jain 1980 Prospects for industrialising : Punjab Economy ICSSR Seminar on Industrialising Punjab - Processes and Problems, GNDU, Amritsar, 1980.
- 41 Singh, A.J. et al. 1980 Regional disparities in the levels of living in northern - India. Eastern Economist, 74(2), Jan. 11, 1980.
- 42 Singh, Nirmal et al. 1980 Potentials of labour absorption in agriculture under normative adjustments in Punjab Ind. Jour. of Agr. Econ., 36(4), Oct-Dec, 1981.
- 43 Aujla, P. et al. 1981 Devising least cost diets - An application of Linear Programming Journal of Research(PAU), 18(1), March, 1981.
- 44 Aujla, P. et al. 1981 Nutritional status of rural Punjab - A study in relation to size of family and socio-economic categories Journal of Research(PAU), 18(4), Dec, 1981, pp 434-44.
- 45 Bal, H.S. et al. 1981 Income employment and poverty among selected agr. households in Punjab Seminar on Structure of Employment and Wages in Rural India, ICSSR, PAU, Ludhiana,

- 46 Bala, Kiran, et al. 1981 A comparative study of different types of housing schemes in Ludhiana (Punjab State) Journal of Research (PAU), 18(4), Dec 1981, pp 445-51.
- 47 Chand, Ramesh & D.S. Sidhu 1981 Distribution of agricultural credit and concentration of overdues in Punjab Financing Agriculture, 13(2), April-June, 1981.
- 48 Grewal, S.S. & I.S. Chatha 1981 Prospects of foodgrain production in Punjab Economic Affairs, 26(1), Jan-March, 1981.
- 49 Kainth, G.S. and R.S. Bawa 1981 Potentials for sugar industry in Punjab Yojna, 25(22), Dec 1-15, 1981.
- 50 Kainth, G.S. 1981 Recent trends in sectoral terms of trade Productivity, 22(3), Oct-Dec, 1981.
- 51 Sain, Inder et al. 1981 Inter-temporal shifts in income, expenditure and investment pattern in Punjab agriculture Economic Affairs, 26(4), Oct-Dec, 1981.
- 52 Singh, A.J. et al. 1981 Role of infrastructure in agricultural development Eastern Economist, 76(6), February, 1981.
- 53 Singh, J.N. and Balwinder Singh 1981 An Economic analysis of urban dairy farms of Ludhiana. Kurukshetra, 29, June, 1981.
- 54 Aujla, P. et al. 1982 Level and Pattern of nutritional management in rural Punjab. Journal of Research (PAU), 19(4), Dec 1982, pp 379-85.
- 55 Chatha, I.S. & Joginder Singh 1982 An analysis of constraints of slow growth crops in the Punjab State Indian Journal of Agr. Econ. 37(3), July-Sept, 1982.
- 56 Dhillon, P.K. & A.S. Khera 1982 An analysis of varietal adoption of maize in Ludhiana district Ind. Jour. of Agr. Research, 16(3), 1982, pp 145-48.
- 57 Grewal, S.S. & P.S. Rangri 1982 Sugar industry in Punjab - Problems and prospects Indian Sugar, 32(4), Annual Number, Feb 1982, pp 241-47.

- 58 Sandhu, H.K. 1982 An econometric analysis of Indian export share of cashew nuts kernels in the world trade Ind. J. of Agri. Econ. 37(3), July-Sept, 1982, pp 300-05.
- 59 Sidhu, D.S. 1982 Socio-economic implications of rapid agricultural growth - The experience of Punjab International Seminar, USSR, May, 1982.
- 60 Sharma, A.C. 1982 Implications of tractorisation for farm employment, productivity and income Ind. J. of Agr. Econ, 37(4), Oct-Dec, 1982, pp 552-55.
- 61 Singh, A.J. et al. 1982 Prospects for industrialising Punjab Seminar 'Economic Development of North-west India', GNDU, Amritsar, April 27, 1982.
- 62 Grewal, S.S. & P.S. Rangri 1982 Imbalances in growth of Punjab agriculture Studies in Punjab Economy, GNDU, Amritsar, 1983, pp 47-64.
- 63 Grewal, S.S. & P.S. Rangri 1983 An analytical study of growth of Punjab agriculture Ind. Jour. of Agr. Econ., 38(4), Oct-Dec, 1983.
- 64 Jain, K.K. 1983 Trend of groundnut cultivation in Punjab Economic Trend, 12(1), May 16, 1983.
- 65 Jindal, Usha, et al. 1983 Female labour participation in Faridkot district (Punjab State) Jour. of Research (PAU), 20(4), Dec, 1983, pp 528-35.
- 66 Sain, Inder 1983 Inter-temporal behaviour of inequality in Southern Punjab Agro-Industrialist, June, 1983
- 67 Sidhu, D.S. 1983 Socio-economic implications of rapid agricultural growth in Punjab Commerce, 146(3749), April 9, 1983, pp 608-12.
- 68 Singh, A.J. & Tirath Singh 1983 Black money in Indian economy : Assessment of its dimensions Southern Economist, 21(18), Jan 15, 1983.
- 69 Singh, A.J. et al. 1983 Changing economic lot of agricultural labourers Economic Affairs, 28(4), Oct-Dec, 1983.
- 70 Singh, Gurbachan & J.L. Kaul 1983 Performance of Punjab Agriculture since green revolution - districtwise analysis. Agrl. Situation in India, 37(11), Feb, 1983, pp 699-704.

- 71 Singh, Jagrup et al. 1983 Public distribution and social welfare UGC Seminar, Ujjain, Dec 4-6, 1983.
- 72 Grewal, S.S. & P.S.Rangi 1984 Sugar industry in Punjab - Problems and prospects National Seminar on Sugar Industry, Chandigarh, March, 1984.
- 73 Kaul, J.L. et al. 1984 An economic analysis of various sources of irrigation in Punjab Ind. Journal of Agril. Econ, 39(3), July-Sept. 1984.
- 74 Jain, K.K. 1984 Structural distribution of operational holdings of different zones of Punjab Ind. Jour. of Agr. Econ., 39(2), April-June, 1984.
- 75 Mittal, H.K. et al. 1984 Energy research in Indian agriculture Annual Convention, I.S.A.E., New Delhi.
- 76 Sandhu, B.K. & Kamal Kanta 1984 A demand analysis of brand preferences in shampoos Effective Management, 1(1), July 1984.
- 77 Sidhu, D.S. & G.S.Gill 1984 Incidence of taxes on farm machinery and implements The Economic Times, Feb 1, 1984.
- 78 Sharma, A.C. 1984 Mechanisation in India agril - An analytical study Ind. Jour. of Agr. Econ., 39(2), April-June, 1984.
- 79 Singh, A.J. & A.S.Bhuller 1984 Poultry development under five year plans in India Poultry Guide, 21(1), Jan 1984, pp 33-36.
- 80 Singh, Jagrup & D.S.Sidhu 1984 An evaluation of price support v/s fertilizer subsidy for food self-sufficiency in India Economic and Political Weekly, Dec 1984.

B-V. SOCIOLOGY AND RURAL SOCIOLOGY

(a) Research Papers Published

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|----|----------------------------|------|--|--|
| 1  | Singh, Ujagar & H.S.Aulakh | 1977 | Factors effecting improved technology in Amritsar district     | Agri. and Agro-Industries Journal, Bombay, Oct 1977.                                   |
| 2  | Deb, P.C.                  | 1978 | Impact of cottage industries on the life of rural poor         | In Land and Water Management in Indian Basin, National Symposium, PAU, Ludhiana, 1978. |
| 3  | Deb, P.C. & A.K.Gupta      | 1978 | Agricultural development and the rural poor                    | In 'Rural Labour in India' ed. S.M.Pandey, New Delhi, 1978.                            |
| 4  | Deb, P.C. & A.S.Kahlon     | 1978 | Peasants organisations in Punjab                               | -do-   |
| 5  | Singh, Harnek & K.L.Sharma | 1978 | Sports goods industry in Punjab and U.P. - A Comparative study | The Economic Times, August 21, 1978  |
| 6  | Singh, Ujagar              | 1978 | Professional ethic of a teacher                                | Advance, Chandigarh, 27(2), Feb 1978.  |
| 7  | Singh, Ujagar              | 1978 | Orienting teaching and research in India                       | Social Change, New Delhi, 8(2), June 1978.   |
| 8  | Singh, Ujagar              | 1978 | Democratization of university education                        | Social Sciences Research Journal, Chandigarh 3(3), Nov 1978.                           |
| 9  | Aggarwal, B.K. & P.C.Deb   | 1979 | Student unrest : a case study of student leaders               | Samaj Vigyan Jagat, 21(1 & 2), June-Dec, 1979.   |
| 10 | Deb, P.C.                  | 1979 | Rope making in Roopnagar district                              | Khadi Gramodyog, Feb, 1979.  |
| 11 | Gupta, A.K. & Harnek Singh | 1979 | Cottage industries and rural poor - A case study in Ludhiana.  | Social Change, 9(3), Sept 1979.  |
| 12 | Singh, Harnek              | 1979 | A case study of weavers in Punjab village                      | Khadi Gramodyog, 25(1), July, 1979.  |



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| Singh, Ujagar              | 1979 | An analytical study of vocational planning by the university students            | Social Sciences Research Journal, 4(1), Sept 1979.           |
| Singh, Ujagar              | 1979 | Directing teaching and research for development                                  | Social Change, New Delhi, 9(1 & 2), March-June, 1979.        |
| Singh, Ujagar              | 1979 | Reflections on educational policies in India                                     | Social Science Research Journal, Chandigarh, 4(3), Nov 1979. |
| Singh, Ujagar              | 1979 | New horizon in teaching and research in sociology in India                       | Ind. Jour. of Social Research, 20(2), Aug 1979               |
| Arora, D.R. & Balbir Kumar | 1980 | Agril. development and rural migration in India                                  | Rural Sociology, Mexico, August 7-12, 1980.                  |
| Deb, P.C. & A.S. Kahlon    | 1980 | Cultural context of agricultural development in Punjab                           | Journal of Sikh Studies, 7(1 & 2), Feb-August, 1980.         |
| Deb, P.C. & B.K. Aggarwal  | 1980 | A study of skills and employment of the farm machinery repairing units in Punjab | P.S.E. Economic Analysis, 2, Dec 1980.                       |
| Deb, P.C. & B.K. Aggarwal  | 1980 | Role of administration leaders in agril. development - A case study of B.D.P.O's | Elite and Development, Concept Publishing Co., New Delhi.    |
| Deb, P.C. & Harnek Singh   | 1980 | A study of university teachers their achievement and job satisfaction            | Ind. Psychological Review, 19(2), 1980, pp 7-19.             |
| Gupta, A.K. & A.K. Bhakoo  | 1980 | Rural to rural migration and characteristics of migrants in Punjab               | Social Change, New Delhi, 10(3 & 4), Sept-Dec 1980.          |
| Singh, Harnek & P.L. Mehra | 1980 | Agricultural development and demographic change                                  | Social Change, 10(3-4), Sept-Dec, 1980.                      |
| Singh, Harnek              | 1980 | Steel-rolling industry - A case study in Punjab and U.P.                         | PSE Economic Analyst 2, Dec 1980                             |
| Singh, Harnek              | 1980 | Economic disparity and educational attainment : A sociological analysis          | Social Change, New Delhi, 10( 1 & 2), March-June, 1980       |



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|----|----------------------------|------|--|--|
| 26 | Aggarwal, B.K. & A.K.Gupta | 1981 | Socio-economic disparities and tension in rural Punjab                                   | Social Change, 4(1), March, 1981   |
| 27 | Aggarwal, B.K. & P.C.Deb   | 1981 | Impact of modern farm technology on income distribution                                  | Symposium on social perspective and Development of Science and Technology, Nov 1981.           |
| 28 | Aggarwal, B.K. & P.C.Deb   | 1981 | Socio-economic inequality in the wake of agril. development in the Punjab                | National Conference of Social Science, Research & Problem of Poverty, New Delhi, June 1981     |
| 29 | Arora, D.R.                | 1981 | Employment generation through flaying centres in Punjab                                  | Khandi Gramodyog, 27(7), April, 1981, pp 370-73.   |
| 30 | Deb, P.C. & B.R.Jindal     | 1981 | Agricultural development and the gains of rural population in Punjab                     | Seminar on Structure of Employment and Wages in Rural India, PAU, July 1-2, 1981.              |
| 31 | Gupta, A.K. & Harnek Singh | 1981 | Cottage industries and rural poor of Punjab  | Khandi Gramodyog, 28(3), Dec, 1981   |
| 32 | Jindal, B.R. & P.C.Deb     | 1981 | Social and economic status of Harijans in the wake of agricultural development in Punjab | First National Conference on Social Sciences and Problems of Poverty, New Delhi in June, 1981. |
| 33 | Mehra, P.L. & P.C.Deb      | 1981 | Agricultural development and consequent gains of rural population                        | Journal of Sikh Studies, 7(1, 2), Feb-Aug, 1981.   |
| 34 | Aggarwal, B.K.             | 1982 | Agricultural development and social change - A case study of rural Punjab                | 16th All-India Sociological Conference, Anamalai, Madras, Dec 1982.                            |
| 35 | Aggarwal, B.K. & A.K.Gupta | 1982 | Socio-economic inequality in rural Punjab - A macro level analysis                       | ESI Economic Analyst, 3(2), Dec 1982.  |
| 36 | Arora, D.R. & R.R.Chole    | 1982 | The construction workers of Delhi  | Social Welfare, 29(2), May, 1982, pp 22-23   |

- 37 Jindal, B.R. & D.R. Arora 1982 Agricultural development and inequality in Punjab Journal of Research (PAU), 19(4), Dec 1982.
- 38 Singh, Harnek 1982 Profile of an agricultural worker 16th All-India Sociological Conference, Anamalai, Madras, Dec 1982
- 39 Singh, Ujagar 1982 New horizon in teaching and research in sociology in India Ind. Jour. of Social Research, Meerut, 23(1), April, 1982.
- 40 Aggarwal, B.K. & A.K. Gupta 1983 Socio-economic inequality in rural Punjab - A micro level analysis PSE Economic Analyst, 4(1), June 1983.
- 41 Aggarwal, B.K. & A.K. Gupta 1983 Inequalities in agrarian structure - A case study of Ghalkhur village 8th National Conference Ind. Academy of Social Science, Hyderabad, July 1983.
- 42 Gupta, A.K. & B.K. Aggarwal 1983 Some techno-economic and sociological aspects of decision making pattern in Punjab - A micro level analysis PSE Economic Analyst, 4(2), Dec 1983
- 43 Singh, Harnek 1983 Socio-psychological characteristics of entrepreneurs - A case study of cycle industry in Punjab and U.P. Indian Psychological Review, 24(4), Dec 1983
- 44 Singh, Ujagar 1983 Professional choice by university students - A sociological perspective Journal of Higher Education, 8(3), Spring, 1983.
- 45 Soni, Kiran & B.R. Jindal 1983 Effect of employment of women on family decision Journal of Research (PAU), 20(4), Dec, 1983.
- 46 Aggarwal, B.K. 1984 Agricultural development and rural leadership in Punjab 9th National Seminar of IASS, Aligarh, April, 1984.
- 47 Aggarwal, B.K. 1984 Status inequality and agricultural development 17th Sociological Conference, Surat, Dec 1984.
- 48 Deb, P.C. & B.K. Aggarwal 1984 Occupational choice and values of agri. students Guru Nanak Journal of Sociology, 5(1), April, 1984.

- 49 Gupta, A.K. & B.K. Aggarwal 1984 Socio-economic impact of marginal farmers and agricultural labourers agency on the level of rural poor Journal of Research (PAU), 21(1), March, 1984.
- (b) Research Papers Accepted/Published
- 1 Singh, Ujagar 1982 Changing status of women, problems and policies Accepted for publication in Ind. Journal of Social Research
  - 2 Singh, Ujagar 1983 University - A light house to free society Submitted to Ind. Journal of Social Science Research
  - 3 Singh, Ujagar 1983 Choice of professions - spontaneous and deliberate : a comparative study Submitted to Sociology Bulletin
  - 4 Singh, Ujagar 1983 Values allotted to choice of professions : A commitment to society -do-
  - 5 Jindal, B.R. & Kiran Soni 1984 Employment of women and socialisation of children Submitted to Social Action
  - 6 Kaur, Sukhchain et al. 1984 Participation of farm women in various home and farm activities in changing agricultural situation in Punjab Submitted to Journal of Research, PAU
  - 7 Soni, Kiran et al. 1984 A study of impact of employment of women on her domestic role Accepted for publication in Journal of Research (PAU).
  - 8 Soni, Kiran et al. 1984 Effect of employment of housewives on the interaction pattern -do-
  - 9 Singh, Ujagar 1984 An appraisal of teaching and research in India Submitted to Emerging Sociology
  - 10 Singh, Ujagar 1984 Choice of professions - Motivational Intensity : A psycho-sociological perspective Submitted to Ind. Jour of Social Relations
  - 11 Singh, Ujagar 1984 Intellect and intellectuals : In role perspective Submitted to Social Change

C. THESES RESEARCH PH.D. AND M.SC. STUDENTS

1. Farm Management, Production Economics and Resource Economics

(A) Ph.D. Theses

- |    |   |      |   |   |
|----|---|------|---|---|
| 1. | H S Bal<br>Major Advisor:<br>H K Manmohan Singh<br>S S Johl | 1977 | New farm technology and income distribution of Punjab farmers   | Unpublished, Punjabi University Library, Patiala.                 |
| 2  | Dhani Ram Kalita<br>Major Advisor:<br>A C Sharma            | 1980 | Farm production decisions in the rainfed areas of Assam plains  | PAU Library (Unpublished)   |
| 3  | Jai Narain Singh<br>Major Advisor:<br>D S Sidhu             | 1980 | Comperative agricultural growth in different farm size categories in Punjab - an application of recursive programming | -do-  |
| 4  | R S Prihar<br>Major Advisor:<br>D S Sidhu                   | 1980 | Impact of mechanization on labour employment - an econometric analysis  | -do-  |
| 5  | Ratjit Singh Jit<br>Major Advisor<br>S S Grewal             | 1980 | A study of the economic profile of agricultural labour in Punjab  | -do-  |
| 6  | G S Gill<br>Major Advisor:<br>R K Patel                     | 1981 | A study on economic potentials of milk production in farming in Punjab  | Unpublished, Kurukshetra University Library, NDRI Library, Karnal |
| 7  | P S Khatra<br>Major Advisor:<br>J C Kalha                   | 1981 | Economics of processing constraints for representative multi-product factors in public sector of north-western India  | -do-  |
| 8  | Tarati Singh<br>Major Advisor:<br>J D Verma<br>S S Grewal   | 1984 | Impact of farm technology in income distribution and agricultural development   | Unpublished, Punjab University Library, Chandigarh                |

(b) M.Sc. Theses

|    |  |      |  |                           |
|----|--|------|--|---------------------------|
| 1  | B R Garg<br>Major Advisor:<br>P L Sankhayan        | 1977 | Rationale of using synthetic farm situations in linear programming   | PAU Library (unpublished) |
| 2  | Gulshan Kumar<br>Major Advisor:<br>S S Grewal      | 1977 | A comparative study of economic conditions of marginal farmers and agricultural labourers in Punjab  | -do-                      |
| 3  | Anil Kumar<br>Major Advisor:<br>K C Dhawan         | 1978 | Impact of long term investments on cropping pattern, resource use and farm income on different sizes of farms in Ludhiana district of Punjab | -do-                      |
| 4  | Naval Kishore<br>Major Advisor:<br>Joginder Singh  | 1978 | A study of inter and inter regional disparities in farm income in Punjab state   | -do-                      |
| 5  | Balbir Singh<br>Major Advisor:<br>B S Basra        | 1979 | A case study of Demand for Tractors in Punjab  | -do-                      |
| 6  | Jagjit Singh<br>Major Advisor:<br>B S Dhillon      | 1979 | Resource allocation efficiency of potato farming in Punjab State   | -do-                      |
| 7  | Bhagwant Singh<br>Major Advisor:<br>S S Grewal     | 1980 | A study of inter-farm variability in productivity in Ludhiana district   | -do-                      |
| 8  | G S Gill<br>Major Advisor:<br>S S Grewal           | 1980 | Economics of dairying in different sized rural dairy farms in Ludhiana District of Punjab State  | -do-                      |
| 9  | Hira Lal Sewak<br>Major Advisor:<br>B S Dhillon    | 1981 | Economics of poultry farming in Punjab state   | -do-                      |
| 10 | Rajinder Singh Sidhu<br>Major Advisor:<br>S S Johl | 1982 | An evaluation of land development and water management works in Punjab state   | -do-                      |

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|----|---|------|--|---------------------------|
| 11 | Rajinderpal Singh<br>Major Advisor:<br>H S Bal  | 1982 | Economics of dairying with crossbred cows<br>V/S Indigenous Milch Animals in Ludhiana  | PAU Library (Unpublished) |
| 12 | Rashpal Singh<br>Major Advisor:<br>J L Kaul     | 1982 | Impact of mixed farming on productivity employ-<br>ment (requirements of infants on farms following<br>wheat paddy rotation in Punjab) | -do-                      |
| 13 | Kuldip Singh<br>Major Advisor:<br>B S Basra     | 1983 | Economics of lining water courses in Punjab<br>State   | -do-                      |
| 14 | Ajit Singh Mann<br>Major Advisor:<br>S S Johl   | 1984 | Integrated crop and livestock production on<br>small farms   | -do-                      |
| 15 | Siamak Mozaffari<br>Major Advisor:<br>A J Singh | 1984 | Relationship between farm size and productivity<br>in Punjab   | -do-                      |
| 16 | Tejinder Singh<br>Major Advisor:<br>A C Sharma  | 1984 | Economic rationale of diversification on<br>individual holdings in Ludhiana district   | -do-                      |

## 2. Agricultural Marketing and Price Analysis

### (a) PH.D. THESES

- |   |  |      |  |  |
|---|--|------|--|--|
| 1 | Balwinder Singh<br>Advisors:<br>1. H. K. Manmohan Singh<br>2. S S Johl | 1977 | An analytical study of acreage response and predicting supply and demand of major agricultural commodities in the Punjab | Unpublished Punjab University Library, Patiala |
| 2 | S A Ali<br>Major Advisor:<br>D S Sidhu                                 | 1979 | Acreage response to prices for sugarcane in the State of UP - an economic study  | Unpublished PAU Library                        |
| 3 | Jagrup Singh<br>Major Advisor:<br>D S Sidhu                            | 1984 | An evaluation of price support versus fertilizer subsidy programme for food sufficiency in India                         | -do-   |

### (b) M.SC. THESES

- |   |  |      |   |      |
|---|--|------|---|------|
| 1 | Mulakh Raj Satyal<br>Major Advisor:<br>K S Gill    | 1977 | Marketing structure for paddy/rice in Nepal with special reference to Bara District | -do- |
| 2 | Naginder Singh<br>Major Advisor:<br>Joginder Singh | 1977 | Economics of processing of fruits and vegetables in Punjab                          | -do- |
| 3 | Harsh Kumar<br>Major Advisor:<br>J L Kaul          | 1979 | An empirical analysis of potato market in Pb.                                       | -do- |
| 4 | Jaswant Singh<br>Major Advisor:<br>K S Gill        | 1979 | Input constraint of small and marginal farmers in Punjab                            | -do- |
| 5 | Madan Lal<br>Major Advisor:<br>K S Gill            | 1979 | Functioning of cotton markets in Punjab   | -do- |

|    |   |      |   |                          |
|----|---|------|---|--------------------------|
| 6  | Satnam Singh Chahal<br>Major Advisor:<br>K. S. Gill   | 1980 | An economic analysis of tomato marketing .<br>Problems in Punjab          | Unpublished, PAU Library |
| 7  | Baljinder Singh Johl<br>Major Advisor:<br>B S Dhillon | 1981 | An analytical study of egg marketing in Punjab                            | -do-                     |
| 8  | Charanjit Singh<br>Major Advisor:<br>K S Gill         | 1981 | Role of focal points in facilitating input<br>marketing                   | -do-                     |
| 9  | Jatinderpal Singh<br>Major Advisor:<br>J L Kaul       | 1982 | An analytical study of marketing of sugarcane<br>in Punjab                | -do-                     |
| 10 | Jagtar Singh<br>Major Advisor:<br>D S Sidhu           | 1983 | Marketing of green fodder in Punjab                                       | -do-                     |
| 11 | Pranab Deb<br>Major Advisor:<br>K S Gill              | 1983 | An analytical study of marketing of apple and<br>walnut in Punjab markets | -do-                     |
| 12 | B B Raj Singh<br>Major Advisor:<br>H K Sandhu         | 1984 | Acreage response and price analysis for paddy<br>in Punjab                | -do-                     |
| 13 | Satwinderpal Singh<br>Major Advisor<br>A J Singh      | 1984 | Acreage response to prices for sugarcane in<br>Punjab State               | -do-                     |



### 3. Agricultural Finance and Cooperation

#### M.SC. THESES

|   |  |      |   |                         |
|---|--|------|---|-------------------------|
| 1 | Baljit Singh<br>Major Advisor:<br>Karam Singh            | 1977 | An analytical study of village adoptions for finance small/marginal farmers and landless labourers in Punjab  | Unpublished PAU Library |
| 2 | Balwinder Singh<br>Major Advisor:<br>Gurbachan Singh.    | 1977 | The economics of agricultural credit use in Ludhiana district of Punjab   | -do-                    |
| 3 | Deepinder M. Vithal<br>Major Advisor:<br>Gurbachan Singh | 1977 | Cost and productivity of institutional credit to the SFDA financed farmers of the Patiala District  | -do-                    |
| 4 | Prabhjit Singh<br>Major Advisor:<br>Gurbachan Singh      | 1977 | A study into the problems of distribution of institutional credit among different categories of farmers   | -do-                    |
| 5 | Baljit Singh<br>Major Advisor:<br>Gurbachan Singh        | 1978 | The study of loan defaults on different farm sizes in Punjab with special reference to Faridkot district of Punjab  | -do-                    |
| 6 | Harjeet Singh<br>Major Advisor:<br>Joginder Singh        | 1978 | Estimation of capital and credit requirements for major marketing operations of potatoes by different categories of farmers in Punjab state with special reference to Jalandhar district. | -do-                    |
| 7 | Harjit Singh<br>Major Advisor:<br>B S Dhillon            | 1978 | Estimation of credit gap in the IRDP area of Sangrur district   | -do-                    |
| 8 | Jasbir Singh Gill<br>Major Advisor:<br>Joginder Singh    | 1978 | Impact of bank finance on production of small holdings in Patiala district of Punjab  | -do-                    |

|    |  |      |  |                         |
|----|--|------|--|-------------------------|
| 9  | Kamaljit Singh<br>Major Advisor:<br>H K Sandhu       | 1978 | A study into overdues of credit advanced to different categories of farmers in Kapurthala district.                                | Unpublished PAU Library |
| 10 | Parveen P. Setia<br>Major Advisor:<br>A C Sharma     | 1978 | Small farmers credit in Ferozepur district   | -do-                    |
| 11 | Ashok Kumar<br>Major Advisor:<br>H K Sandhu          | 1979 | An economic analysis of credit requirements and feasibility of production of pulses in Bathinda district of Punjab                 | -do-                    |
| 12 | Jain Bhushan<br>Major Advisor:<br>K C Dhawan         | 1 79 | Availability and rationale of fixed farm capital in Punjab agriculture   | -do-                    |
| 13 | Kamaljit Singh<br>Major Advisor:<br>K. C Dhawan      | 1980 | An economic analysis of capitalisation of farmers in Punjab  | -do-                    |
| 14 | Anil Sharma<br>Major Advisor:<br>J L Kaul            | 1980 | A study into saving behaviour of farm families at various levels of production technology in the Ludhiana district of Punjab state | -do-                    |
| 15 | Ashok Kumar<br>Major Advisor:<br>Gurbachan Singh     | 1980 | Impact of bank credit on the socio-economic development of area  | -do-                    |
| 16 | Jagrup Singh Sidhu<br>Major Advisor:<br>D S Sidhu    | 1980 | A comparative study of successful and unsuccessful primary agricultural cooperative service societies in Sangrur district          | -do-                    |
| 17 | Om Gauri Dutt Sharma<br>Major Advisor:<br>H K Sandhu | 1980 | An economic analysis of the impact of land ceiling on credit requirements of the Punjab farmers in the Amritsar district           | -do-                    |

|    |  |      |   |                         |
|----|--|------|---|-------------------------|
| 18 | Rachhpal Singh<br>Major Advisor:<br>Gurbachan Singh      | 1980 | A detailed study of methods and procedures adopted by commercial banks advising agricultural loans and their simplification for speedy disbursement of loans. | Unpublished PAU Journal |
| 19 | Rajinderpal Singh<br>Major Advisor:<br>B S Dhillon       | 1980 | Credit requirements and optimum resource use pattern in the cotton growing areas of Punjab state  | -do-                    |
| 20 | Ramesh Chand<br>Major Advisor:<br>D S Sidhu              | 1980 | A study of loan overdues in problem area of Punjab State  | -do-                    |
| 21 | Surinder K. Vashisht<br>Major advisor:<br>Joginder Singh | 1980 | A study into distribution of short and medium term cooperative credit in Punjab   | -do-                    |
| 22 | Tarsem Singh<br>Major Advisor:<br>A C Sharma             | 1980 | Rural credit in Hoshiarpur district   | -do-                    |
| 23 | Gurpreet Singh<br>Major Advisor:<br>A J Singh            | 1981 | An analytical study of rural savings in India with special reference to Punjab State  | -do-                    |
| 24 | Inderpal Singh<br>Major Advisor:<br>B S Basra            | 1981 | Estimation of capital and credit requirements on different farm sizes at various levels of technology in Ludhiana district of Punjab                          | -do-                    |
| 25 | Y B Thapa<br>Major Advisor:<br>J L Kaul                  | 1981 | An equity and efficiency analysis of agricultural credit in Nepal   | -do-                    |
| 26 | Balwant Singh<br>Major Advisor:<br>H S Bal               | 1982 | An analytical study of overdues credit advanced by cooperatives (Three tier system) in Punjab   | -do-                    |
| 27 | Gurdev Singh   | 1982 | Role of commercial banks in income generation   | -do-                    |

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|----|--|------|--|-------------------------|
| 28 | Nirmal Singh<br>Major Advisor:<br>Joginder Singh | 1982 | A study into the lending procedure and economic rationale of long term cooperative credit in Ludhiana district   | Unpublished PAU Library |
| 29 | Kamal Kanta<br>Major Advisor:<br>P L Sankhayan   | 1984 | Demand functions for short term agricultural credit and the effect of changing credit supply on cropping pattern, labour employment and farm income in the central plains of Punjab. | -do-                    |
| 30 | Sudha Beri<br>Major Advisor:<br>A C Sharma       | 1984 | Cost structure of bank lendings to individual farmers in Ludhiana district   | -do-                    |

4. SOCIOLOGY AND RURAL SOCIOLOGY

(a) PH.D. THESES

- |    |  |      |   |                         |
|----|--|------|---|-------------------------|
| 1. | S K Sangle<br>Major Advisor:<br>P C Deb          | 1978 | Technological growth and rural change in dry farming VS irrigated farming system in Maharashtra                                     | Unpublished PAU Library |
| 2  | P L Mehra<br>Major advisor:<br>P C Deb           | 1979 | Agricultural development and social change in Rural Punjab  | -do-                    |
| 3  | B R Jindal<br>Major advisor:<br>P C Deb          | 1979 | A study of the nature of rural poverty in the wake of agricultural development of Punjab  | -do-                    |
| 4  | B K Agarwal<br>Major Advisor:<br>P C Deb         | 1980 | Socio-economic development of weaker sections & comparative study of farmers and agricultural labourers in the rural Punjab         | -do-                    |
| 5  | Kanwar Jasbir Singh<br>Major Advisor:<br>P C Deb | 1981 | A study of the socio-economic impact of integrated rural development programmes on different sections of rural population in Punjab | -do-                    |

M.SC. THESES

- |   |  |      |  |      |
|---|--|------|--|------|
| 1 | Manmohan Singh<br>Major advisor:<br>P C Deb      | 1977 | Social implications of small farmers development agency on the socio-economic conditions of rural poor in Punjab | -do- |
| 2 | Ashwani Kumar<br>Major advisor:<br>K L Sharma    | 1978 | A sociological study of rural immigrants in Punjab   | -do- |
| 3 | Kanwar Jasbir Singh<br>Major Advisor:<br>P C Deb | 1978 | Socio-psychological analysis of integrated rural development programme in Punjab                                 | -do- |

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|---|---|------|---|-------------------------|
| 4 | Manjit Singh<br>Major Advisor:<br>D R Arora   | 1979 | A socio-economic study of Punjabi farmers<br>settled in U.P.                                    | Unpublished PAU Library |
| 5 | Kiran Soni<br>Major advisor:<br>B R Jindal    | 1980 | A study of impact of employment (as school and<br>college teachers) of household on family life | -do-                    |
| 6 | Jasbir Kaur<br>Major advisor:<br>B K Agarwal  | 1982 | Agricultural development and demographic<br>change in Rural Punjab                              | -do-                    |
| 7 | Sukhchain Kaur<br>Major advisor:<br>D R Arora | 1982 | Role of women in changing agricultural situation<br>in Punjab                                   | -do-                    |

#### D. POPULAR ARTICLES

- |    |                              |      |  |   |
|----|------------------------------|------|--|---|
| 1  | Bal, H.S. et al.             | 1977 | Kheti de hisab kitab rakhan di mahatata                | Changi Kheti, July, 1977                    |
| 2  | Sandhu, H.K.                 | 1977 | Green revolution - rural Punjab mode of living changes | The Economic Times, Jan 8, 1977             |
| 3  | Bal, H.S. et al.             | 1978 | Kheti wich veutbandi di mahatata<br>Kheti              | Changi Kheti, April, 1978                   |
| 4  | Bal, H.S. et al.             | 1978 | Di veutbandi kivan karani chahidi hai                  | Changi Kheti, Nov, 1978.                    |
| 5  | Sidhu, D.S.                  | 1978 | Earn more money through scientific marketing of wheat  | Progressive Farming, 14(8), April, 1978.    |
| 6  | Sidhu, D.S.                  | 1978 | Fertilizer uses and wheat yields                       | Indian Farming, ICAR, Feb, 1978             |
| 7  | Sidhu, D.S. & P.S.Rangi      | 1978 | Marketing of inputs and their pricing pattern          | Indian Express, Chandigarh, April 13, 1978. |
| 8  | Singh, Balwinder             | 1978 | Marketing of potatoes with profit                      | Progressive Farming, May, 1978              |
| 9  | Singh, Rachhpal              | 1978 | Farmers show aptitude for industry                     | Progressive Farming, April, 1978            |
| 10 | Singh, Rachhpal              | 1978 | Kheti nal sambhandat dhandhe appanao                   | Changi Kheti, May, 1978.                    |
| 11 | Dhillon, B.S. & D.S.Sidhu    | 1979 | Kheti de kam da lekha jokha te arthak veontbandi       | Changi Kheti, 1979.                         |
| 12 | Kumar, Narinder & H.K.Sandhu | 1979 | Points of extension credit coordination                | Progressive Farming, July, 1979.            |
| 13 | Sidhu, D.S. & B.S.Dhillon    | 1979 | Kheti bari ate pasu palan da dhandha                   | Changi Kheti, June, 1979.                   |
| 14 | Singh, Joginder              | 1979 | Procedure of obtaining credit from land mortgage banks | Progressive Farming, Sept, 1979             |
| 15 | Singh, Joginder              | 1979 | Farm Loan procedure of commercial banks                | Progressive Farming, Dec, 1979.             |

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|----|---------------------------------|------|--|---------------------------------------|
| 16 | Bal, H.S. & Swaran Singh        | 1980 | Arhar pays   | Khet. Khalwar, 1(3), June, 1980       |
| 17 | Chatha, I.S. & Joginder Singh   | 1980 | Least cost combinations of fertilizers for wheat and potato            | Progressive Farming, Nov, 1980        |
| 18 | Gill, K.S.                      | 1980 | Marketing problem of tomatoes  | Khet Khalwar, 1(2), May, 1980         |
| 19 | Kumar, Narinder & H.K. Sandhu   | 1980 | Karja lain lai ad karia ate kisanā wichkar talmail lai kuj safal nukte | Changi Kheti, Feb, 1980               |
| 20 | Prihar, H.S.                    | 1980 | Alunan lai khadan di arthaik choun                                     | Nawan Zamana, Jalandhar, Sept, 1980   |
| 21 | Prihar, R.S. & G.S. Chela       | 1980 | Karaundi Di kasat  | Nawan Zamana, Jalandhar, August, 1980 |
| 22 | Singh, Balwinder                | 1980 | Joga jat and vigyani   | Khet Khalwar, 1(5), Aug, 1980         |
| 23 | Singh, Balwinder                | 1980 | Joga Jat and vigyani   | Khet Khalwar, 1(6), Sept, 1980        |
| 24 | Singh, Balwinder                | 1980 | Joga jat and vigyani   | Khet Khalwar, 1(7), Oct, 1980         |
| 25 | Singh, Balwinder                | 1980 | Vigyani and Banta Singh  | Khet Khalwar, 1(8), Nov, 1980         |
| 26 | Singh, Balwinder                | 1980 | Kanak kewen wichiae  | Changi Kheti, 16(12), Dec, 1980       |
| 27 | Singh, Dilbagh & Narinder Kumar | 1980 | Higher yields, returns from early brinjal transportation               | The Economic Times, April 15, 1980.   |
| 28 | Singh, Joginder & Balwant Singh | 1980 | Kheti yojnabandi   | Changi Kheti, 16(8), Aug, 1980.       |
| 29 | Singh, Joginder & I.S. Chatha   | 1980 | Bahu bhanti kheti  | Changi Kheti, 16(8), Aug, 1980        |
| 30 | Singh, Joginder & I.S. Chatha   | 1980 | Kanak lai davaiyan di chaon  | Changi Kheti, 16(11), Nov, 1980.      |



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|----|---------------------------------|------|--|--|
| 31 | Chatha, I.S. & Joginder Singh   | 1981 | Kheti wich hisab kitab rakhan di mahatata                        | Changi Kheti, 17(3),<br>March, 1981            |
| 32 | Gill, H.S. & R.S. Prihar        | 1981 | Moong ML 131 di safal kashit                                     | Nawan Zamana, Jalandhar,<br>May, 1981.         |
| 33 | Prihar, R.S. & G.S. Chela       | 1981 | Arhar AL 15 di kashat lai nukte                                  | Nawan Zamana, Jalandhar,<br>May, 1981          |
| 34 | Prihar, R.S. & G.S. Chela       | 1981 | Aluan te khadan da kharcha kiwain ghatayae                       | Changi Kheti, Oct, 1981                        |
| 35 | Prihar, R.S. & Jagir Singh      | 1981 | Torian di kashat   | Nawan Zamana, Jalandhar,<br>August, 1981.      |
| 36 | Singh, Balwinder                | 1981 | Sabzian kewan wecharia   | Changi Kheti, 17(2), Feb, 1981                 |
| 37 | Singh, Joginder & T.S. Sidhu    | 1981 | Common practices of groundnut cultivation in Sangrur district    | Progressive Farming, May, 1981.                |
| 38 | Singh, Rachhpal                 | 1981 | Lowering risk in agriculture                                     | Progressive Farming, Jan, 1981                 |
| 39 | Vashisht, S.K. & Joginder Singh | 1981 | Lending procedure of cooperative agricultural service societies  | Progressive Farming, April, 1981               |
| 40 | Chatha, I.S.                    | 1982 | Aluan da mandikaran ate godaman wich rakhna                      | Changi Kheti, 18(2), Feb, 1982                 |
| 41 | Chatha, I.S. & Joginder Singh   | 1982 | Kanak di fasal ton wadhere adaman lanlai kujh jaruri nuskhe      | Changi Kheti, 18(10), Oct, 1982                |
| 42 | Prihar, R.S.                    | 1982 | Avtar Singh - an enterprising farmer                             | Progressive Farming, March, 1982               |
| 43 | Prihar, R.S.                    | 1982 | Kisan ik prabandak de roop wich                                  | Changi Kheti, Aug, 1982.                       |
| 44 | Sidhu, D.S. & P.S. Rangi        | 1982 | Economics of production and marketing of pearl millets in Punjab | A handbook for pearl millet workers, PAU, 1982 |

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|----|---------------------------------|------|--|---|
| 45 | Singh, Gurbachan & D.S.Sidhu    | 1982 | Banks in the service of farmers                                    | Progressive Farming, 18(10), June, 1982.  |
| 46 | Singh, Joginder                 | 1982 | Farm te kharach ate amdan da sadharan hisab rakhna                 | Changi Kheti, 18(7), July, 1982           |
| 47 | Singh, Joginder & I.S.Chatha    | 1982 | Kanak lai ghat kharcha wallian dayaiyan                            | Changi Kheti, 18(10), Oct, 1982           |
| 48 | Dhaliwal, R.S. & Joginder Singh | 1983 | Commercial coriander growing - A case study of Haraj village       | Progressive Farming, 19(2), Feb, 1983     |
| 49 | Prihar, R.S.                    | 1983 | Kheti wich veotbandi di mahatata                                   | Changi Kheti, Jan, 1983                   |
| 50 | Prihar, R.S.                    | 1983 | Khetan wich sufne byan wala kisan - Mohinder Singh Dosanjh         | Changi Kheti, June, 1983                  |
| 51 | Prihar, R.S. & K.K.Arora        | 1983 | Kanak wich khadan di lor ate kharche da verva                      | Changi Kheti, Nov, 1983                   |
| 52 | Prihar, R.S. & K.K.Arora        | 1983 | Economics of fertilizer application in wheat                       | Progressive Farming, Dec, 1983            |
| 53 | Sidhu, D.S. & G.S.Gill          | 1983 | Making farming your business                                       | Farmer's Journal, 2 (9), Jan, 1983.       |
| 54 | Singh, Joginder                 | 1983 | Bahu bhanti kheti  | Sanket Pattar, Jan-March, 1983            |
| 55 | Singh, Joginder & H.S.Thind     | 1983 | Marketing of cauliflower in Gurdaspur district - some observations | Progressive Farming, 19(2), Aug, 1983     |
| 56 | Singh, Joginder & P.S.Sidhu     | 1983 | Economics of mechanising farm operations                           | Progressive Farming, 19(12), August, 1983 |
| 57 | Gill, K.S.                      | 1984 | Marketing of wheat in Punjab                                       | Progressive Farming, May, 1984.           |
| 58 | Gill, K.S.                      | 1984 | Marketing of paddy   | Progressive Farming, Nov, 1984            |

|    |                              |      |  |                                   |
|----|------------------------------|------|--|-----------------------------------|
| 59 | Saini, A.S. & Joginder Singh | 1984 | Jhone da suchaja Mandi karan                                       | Punjabi Tribune, Oct 16, 1984     |
| 60 | Singh, Balwinder             | 1984 | Wadhre munafa len layee amb wechan de kujh suchaja dhang           | Changi Kheti, June, 1984.         |
| 61 | Singh, Joginder              | 1984 | Kheti de sadhna di yog varton                                      | Punjabi Tribune, April 19, 1984.  |
| 62 | Singh, Joginder              | 1984 | Punjab cotton crop- modest recovery likely                         | The Economic Times, Aug. 20, 1984 |
| 63 | Singh, Joginder & P.S.Sidhu  | 1984 | Tractor di varton de arthak pakh                                   | Changi Kheti, 20(2), Feb, 1984    |
| 64 | Singh, Joginder & P.S.Sidhu  | 1984 | Bijli di motor ate diesel engine nal sanchai de kharchian da verva | Changi Kheti, 20(2), Feb, 1984    |
| 65 | Singh, T.H. et al.           | 1984 | Picking and cleaning of cotton and its marketing                   | Progressive Farming, April, 1984  |

E.MAJOR DEPARTMENTAL RESEARCH REPORTS (MIMEOGRAPHED)

|                             |      |   |   |
|-----------------------------|------|---|---|
| 1. Deb, P.C.                | 1977 | Social dimensions of drug abuse in the Punjab State   | Mimeographed report for ICSSR, New Delhi.   |
| 2. Deb, P.C. & M.S. Gill    | 1977 | Social implications of SFDA on the rural poor   | Mimeographed report   |
| 3. Deptt. of Econ. & Soc.   | 1977 | Cost of cultivation and input structure for principal crops in Punjab, 1974-75                      | -do-  |
| 4. Deptt. of Econ. & Soc.   | 1977 | Annual research report for the year 1976-77   | -do-  |
| 5. Grewal, S.S. et.al.      | 1977 | Economic potentials of grain production in the Punjab (India) PL-480                                | -do-  |
| 6. Kumar, Narinder          | 1977 | Operational research project on reclamation of alkali soils in Kapurthala district                  | -do-  |
| 7. Sankhayan, P.L. et.al.   | 1977 | An analysis of income and expenditure pattern of Punjab farmers- Report for the year 1975-76        | -do-  |
| 8. Singh, Harnek & P.C. Deb | 1977 | Agro-economic development and demographic change- a longitudinal study.                             | -do-  |
| 9. Arora, D.R.              | 1978 | Block development planning identification of feasible projects in Mat Block of Mathura district     | Mimeographed report Sri Ram Centre for Industrial Relations and Human Resources, New Delhi. |
| 10. Arora, D.R.             | 1978 | Block development planning identification of feasible projects in Atranli block of Abjail district. | -do-  |
| 11. Dept. of Econ. & Soc.   | 1978 | Cost of cultivation and input structure for principal crops in Punjab 1975-76.                      | Mimeographed report.  |
| 12. Dept. of Econ. & Soc.   | 1978 | Annual research report, 1977-78   | -do-  |
| 13. Grewal, S.S. et.al.     | 1978 | Economic potentials of grain production in Punjab   | -do-  |

|     |                            |      |  |                     |
|-----|----------------------------|------|--|---------------------|
| 14. | Sankhayan, P.L. et. al.    | 1978 | An analysis of income and expenditure pattern of Punjab farmers- report for the year 1976-77.                  | Mimeographed report |
| 15. | Deb, P.C. & J. Singh       | 1979 | Integrated rural development programme-a case study of Punjab  | -do-                |
| 16. | Deptt. of Econ. & Soc.     | 1979 | Cost of cultivation and input structure for principal crops in Punjab 1976-77                                  | -do-                |
| 17. | Deptt. of Econ. & Soc.     | 1979 | Annual Research Report 1978-79   | -do-                |
| 18. | Grewal, S.S. & M.S. Sidhu  | 1979 | A study of migrant agricultural labour in Punjab   | -do-                |
| 19. | Grewal, S.S. et. al.       | 1979 | An analysis of income and expenditure pattern of Punjab farmers-Report for the year 1977-78                    | -do-                |
| 20. | Kahlon, A.S. et. al.       | 1979 | A study of the market structure, conduct and performance of foodgrains markets in Punjab                       | -do-                |
| 21. | Arora, D.R. & Balbir Kumar | 1980 | Agricultural development and rural to rural migration  | -do-                |
| 22. | Arora, D.A. & Manjit Singh | 1980 | Migration of peasants- a socio-cultural study  | -do-                |
| 23. | Deb, P.C. et. al.          | 1980 | Nature and dimensions of social change in the wake of green revolution in Punjab- A study of affluent farmers. | -do-                |
| 24. | Deptt. of Econ. & Soc.     | 1980 | Annual research report, 1979-80  | -do-                |
| 25. | Gill, K.S. et. al.         | 1980 | Marketing problems of citrus growers in Punjab   | -do-                |
| 26. | Sidhu, D.S. et. al.        | 1980 | An analysis of income and expenditure pattern of Punjab farmers- report for the year 1978-79.                  | -do-                |
| 27. | Singh, Joginder            | 1980 | Subject matter seminar on farm management, Jan. 18-25, 1980  | -do-                |
|     |                            | 1980 | Sub-<br>ment with  |                     |

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|-------------------------------------|------|--|--|
| 29. Deb, P.C. & A.K. Gupta          | 1981 | Social implications of green revolution in rural Punjab  | Mimeographed report  |
| 30. Deptt. of Econ. & Soc.          | 1981 | Annual research report, 1980-81  | -do-   |
| 31. Gill, K.S. & D.S. Sidhu         | 1981 | Availability of wheat bhūsa and paddy straw for industrial use in Ludhiana and Sangrur districts       | -do-   |
| 32. Sharma, A.C. et. al.            | 1981 | Bench mark survey, soil conservation and engg. component, Dholbaha catchment, 1979-80                  | -do-   |
| 33. Sidhu, D.S. et. al.             | 1981 | An analysis of income and expenditure pattern of Punjab farmers, report for the year 1979-80.          | -do-   |
| 34. Singh, Joginder                 | 1981 | subject matter training seminar on farm management and training, Sept. 13-20, 1981.                    | -do-   |
| 35. Deb, P.C.                       | 1982 | Bazzigars in Punjab-a socio-economic survey  | -do-   |
| 36. Deb, P.C. & D.R. Arora          | 1982 | Impact of integrated child development service project in Nurpur Bet block of Punjab                   | -do-   |
| 37. Deptt. of Econ. & Soc.          | 1982 | Annual research report, 1981-82  | -do-   |
| 38. Grewal, S.S. et. al.            | 1982 | An analysis of income and expenditure pattern of Punjab farmers report for the year, 1980-81           | -do-   |
| 39. Halcrow MacDonald & H.S. Sandhu | 1982 | Kandi-watershed and area development project-feasibility report, Mehngarwal watershed, Vol. I, II, III | Mimeographed Directorate of Planning & Design Studies, Chandigarh, Nov. 1982.            |
| 40. Halcrow MacDonald & H.S. Sandhu | 1982 | Kandi watershed and area development project-feasibility report, Mehngarwal watershed, Vol. I, II, III | Mimeographed report, Directorate of Planning and Design, Studies, Chandigarh, Dec. 1982. |
| 41. Sandhu, H.S. et. al.            | 1982 | Bench mark survey catchment of selected watersheds under KWADP   | Mimeographed report. 2   |

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| 42. Bal, H.S. et. al.                             | 1983 | Bench mark survey, lower catchment of the selected water-sheds under KWADEP, 1979-80               | Mimeographed report.  |
| 43. Deptt. of Econ. & Soc.                        | 1983 | Annual research, 1982-83   | -do-  |
| 44. Directorate of Planning, Design & H.S. Sandhu | 1983 | Kandi watershed and area development project-feasibility report, Budhki Watershed, Vol. I, II, III | Directorate of Planning & Design Studies, Chandigarh, June, 1983.                       |
| 45. -do-  | 1983 | Kandi watershed & area development project-feasibility report, Lalwan Watershed, Vol. I, II & III  | Directorate of Planning & Design Studies, Chandigarh, Oct. 1983                         |
| 46. Grewal, S.S. et. al.                          | 1983 | Structure of land holding and farm investment pattern in Punjab-report for the year 1981-82        | Mimeographed report.  |
| 47. Grewal, S.S. et. al.                          | 1983 | A study into the economics of farming in Punjab state for the year 1981-82.                        | -do-  |
| 48. MacDonaldz H & H.S. Sandhu                    | 1983 | Kandi watershed and area development project-feasibility report Seswan watershed, Vol. I, II & III | Mimeographed report, Directorate of Planning and Design Studies, Chandigarh, Jan. 1983. |
| 49. Sandhu, H.S.                                  | 1983 | Maili watershed-reconnaissance socio-economic project  | -do- July, 1983.  |
| 50. Sandhu, H.S.                                  | 1983 | Janauri watershed, reconnaissance socio-economic profile   | Oct. 1983.  |
| 51. Sidhu, D.S. et. al.                           | 1983 | An indepth study into the production and marketing of eggs in India                                | Mimeographed report   |
| 52. Singh, Gurbachan                              | 1983 | A study on repayment and performance of borrowers in Punjab  | -do-  |
| 53. Singh, Joginder & D.S. Sidhu                  | 1983 | Economics of orchards in Punjab  | -do-  |
| 54. Deptt. of Econs. & Soc.                       | 1984 | Annual research report for the year, 1983-84   | -do-  |

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| 55. Directorate of Planning and Design Studies & H.S.Sandhu | 1984 | Kandi watershed and area development project- feasibility report Vol.I,II and III                         | Mimeographed report, Directorate of Planning and Design Studies, Chandigarh, Feb.1984. |
| 56. Grewal, S.S.et.al.                                      | 1984 | A study into the economics of farming in the Punjab - a report for the year 1982 -83                      | Mimeographed report  |
| 57. Sandhu, H.S.  | 1984 | Patiala-ki-Rao watershed reconnaissance socio-economic profile.   | Mimeographed report, Directorate of Planning and Design Studies, Chandigarh, Feb.1984. |
| 58. Sandhu, H.S.  | 1984 | Studies on economic viability of selected cottage industries and problems of weaker section in kandi area | -do-   |
| 59. Singh, A.J. and Balbir Kumar                            | 1984 | Evaluation survey report -Animal Husbandry Component  | -do-   |
| 60. Singh, A.J. et.al.                                      | 1984 | Evaluation survey report-soil conservation and  | -do-   |



F. STAFFING PATTERN AS ON 1.1.1985

| S.No.                    | Name            | Designation               | Field of specialisation                          | Place of Posting |
|--------------------------|-----------------|---------------------------|--|------------------|
| <u>A. Teaching Staff</u> |                 |                           |  |                  |
| 1                        | Dr S.S.Grewal   | Professor of Economics    | Agricultural Economics<br>Farm Management        | Ludhiana.        |
| 2                        | Dr P.C.Deb      | Professor of Sociology    | Rural Sociology                                  | Ludhiana         |
| 3                        | Dr G.S.Poonia   | Assoc.Prof.of Agr.Finance | Agril. Finance<br>Land Economics                 | Ludhiana         |
| 4                        | Dr J.L.Kaul     | Assoc.Prof.of Agrl.Econ.  | Econometrics<br>Agril. Economics                 | Ludhiana.        |
| 5                        | Dr G.S.Gill     | Assoc.Prof.of Agrl.Econ.  | Agril. Economics<br>Dairy Economics              | Ludhiana         |
| 6                        | Dr H.K.Sandhu   | Associate Professor       | Agricultural Economics<br>Agricultural Marketing | Ludhiana         |
| 7                        | Dr B.K.Agarwal  | Assistant Professor       | Rural Sociology                                  | Ludhiana         |
| 8                        | S.Ojagar Singh  | Assistant Professor       | Sociology  | Ludhiana         |
| 9                        | Dr P.S.Khatra   | Assistant Professor       | Agricultural Economics<br>Dairy Economics        | Ludhiana         |
| 10                       | Dr B.S.Basra    | Assistant Professor       | Agricultural Economics                           | Ludhiana         |
| 11                       | Dr D.R.Arora    | Assistant Professor       | Sociology  | Ludhiana         |
| 12                       | S.Harneek Singh | Assistant Professor       | Sociology  | Ludhiana         |
| 13                       | Mrs P.K.Dhillon | Assistant Professor       | Economics  | Ludhiana         |
| 14                       | Dr B.R.Jindal   | Assistant Professor       | Rural Sociology                                  | Ludhiana         |
| 15                       | Mrs Kiran Sethi | Assistant Professor       | Economics  | Ludhiana         |

B. Research Staff

|    |                    |                             |   |           |
|----|--------------------|-----------------------------|---|-----------|
| 1  | Dr D.S.Sidhu       | Professor and Head          | Agricultural Marketing, Agricultural Price Policy, Price Analysis | Ludhiana  |
| 2  | Dr A.C.Sharma      | Senior Farm Economist       | Agricultural Economics, Farm Management                           | Ludhiana  |
| 3  | Dr P.L.Sankhayan   | Farm Economist              | Farm Management and Production Economics                          | Ludhiana  |
| 4  | Dr K.S.Gill        | Economist (Marketing)       | Agricultural Marketing, Price Policy                              | Ludhiana  |
| 5  | Dr A.J.Singh       | Farm Economist              | Economics/Agril.Econ./Statistics                                  | Ludhiana  |
| 6  | Dr H.S.Sandhu      | Economist                   | Farm Management   | Ludhiana  |
| 7  | Dr H.S.Bal         | Farm Economist              | Farm Management   | Ludhiana  |
| 8  | Dr J.N.Singh       | Farm Economist              | Quantitative Economics/Agril. Economics                           | Ludhiana  |
| 9  | Dr Balwinder Singh | Economist(Marketing)        | Agricultural Marketing, Price Analysis                            | Ludhiana  |
| 10 | Dr B.S.Dhillon     | Farm Economist              | Farm Management   | Ludhiana  |
| 11 | Dr Tirath Singh    | Statistician                | Statistics, Economics and Agri.Economics                          | Ludhiana. |
| 12 | Dr R.S.Prihar      | Asstt.Farm Economist        | Farm Management   | Ludhiana  |
| 13 | Sh P.S.Sandhu      | Asstt.Farm Economist        | Farm Management   | Ludhiana  |
| 14 | Sh Narinder Kumar  | Asstt.Farm Economist        | Farm Management   | Ludhiana  |
| 15 | Sh P.S.Rangi       | Asstt.Economist (Marketing) | Agricultural Marketing  | Ludhiana  |
| 16 | Dr Rachhpal Singh  | Asstt.Farm Economist        | Farm Management   | Ludhiana  |
| 17 | Sh Bant Singh      | Asstt.Farm Economist        | Farm Management   | Ludhiana  |
| 18 | Sh Inder Sain      | Asstt.Farm Economist        | Economics/Agr.Economics   | Ludhiana  |
| 19 | Sh A.S.Joshi       | Asstt.Farm Economist        | Economics/Agr.Economics   | Ludhiana  |
| 20 | Sh Balbir Kumar    | Asstt.Rural Sociologist     | Rural Sociology   | Ludhiana  |
| 21 | Sh I.S.Chatha      | Asstt.Economist(Marketing)  | Agricultural Marketing  | Ludhiana  |
| 22 | Sh A.K.Gupta       | Asstt.Rural Sociologist     | Sociology   | Ludhiana  |
| 23 | Dr R.S.Rana        | Asstt. Statistician         | statistics  | Ludhiana  |
| 24 | Sh K.K.Jain        | Asstt.Statistician          | Statistics  | Ludhiana  |
|    |                    | Asstt.Economist(Marketing)  | Agricultural Marketing  | Ludhiana  |

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|----|-----------------|------------------------------|------------------------|----------------|
| 26 | Dr Ramesh Chand | Asstt. Economist             | Agricultural Economics | Ludhiana       |
| 27 | Sh Satnam Singh | Asstt. Economist (Marketing) | Agricultural Marketing | Ludhiana       |
| 28 | Dr Jagrup Singh | Asstt. Economist (Marketing) | Agricultural Marketing | Ludhiana       |
| 29 | Sh J.S. Chamak  | Asstt. Statistician          | Statistics             | On study leave |
| 30 | Sh G.S. Mann    | Asstt. Farm Economist        | Farm Management        | On study leave |
| 31 | S. Nirmal Singh | Asstt. Statistician          | Statistics             | On study leave |

C. Extension Staff

|    |                   |                               |                 |                |
|----|-------------------|-------------------------------|-----------------|----------------|
| 1  | Dr Joginder Singh | Extension Specialist (FM)     | Farm Management | Ludhiana       |
| 2  | Dr R.S. Dhaliwal  | Extension Specialist (FM)     | Farm Management | Faridkot       |
| 3  | Dr P.L. Mehra     | Extension Specialist (FM)     | Farm Management | Amritsar       |
| 4  | Sh G.S. Brar      | Extension Specialist (FM)     | Farm Management | Patiala        |
| 5  | Sh H.S. Thind     | District Ext. Specialist (FM) | Farm Management | Kapurthala     |
| 6  | Sh D.S. Gill      | District Ext. Specialist (FM) | Farm Management | Jalandhar      |
| 7  | Sh H.P.S. Gill    | District Ext. Specialist (FM) | Farm Management | Ropar          |
| 8  | Sh T.S. Sidhu     | District Ext. Specialist (FM) | Farm Management | Bathinda       |
| 9  | Dr A.S. Saini     | District Ext. Specialist (FM) | Farm Management | Gurdaspur      |
| 10 | S Pritam Singh    | District Ext. Specialist (FM) | Farm Management | Ferozepur      |
| 11 | S P.S. Baweja     | District Ext. Specialist (FM) | Farm Management | On study leave |