

# ANNUAL REPORTS 1961-2011

Five Decades of  
Agro-Economic Research Centre  
Sardar Patel University  
Vallabh Vidyanagar (Gujarat)



**Agro-Economic Research Centre**

*For the States of Gujarat and Rajasthan*  
(Ministry of Agriculture & Farmers Welfare, Govt. of India)

**Sardar Patel University**

Vallabh Vidyanagar, Dist. Anand, Gujarat

July 2017



# An Institution Builder Par Excellence



**H. M. Patel, I.C.S. (Retd.)**  
(August 27, 1904 – November 30, 1993)

## Director / Hon. Director of the Centre



**Dr. V. S. Vyas**  
(Founder Director)  
(01.07.1961 - 30.06.1972)



**Dr. Mahesh Pathak**  
(Hon. Director)  
(01.07.1972 - 12.09.2006)



**Dr. P. K. Singh**  
(Hon. Director)  
(12.09.2006 - 02.08.2008)



**Dr. H. P. Trivedi**  
(Hon. Director)  
(02.08.2008 - 02.05.2010)



**Dr. R. H. Patel**  
(Director)  
(03.05.2010 - 09.11.2011)



**Dr. Rajeshree Dutta**  
(Officer In-charge)  
(09.11.2011 - 05.07.2012)



**Dr. S. S. Kalamkar**  
(Director & Professor)  
(05.07.2012 - till date)

# ANNUAL REPORTs

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Five Decades of  
Agro-Economic Research Centre  
Sardar Patel University,  
Vallabh Vidyanagar (Gujarat)



*AERC, SPU, VVN*  
*Established in 1961*

### **Agro-Economic Research Centre**

*For the states of Gujarat and Rajasthan*

*(Ministry of Agriculture & Farmers Welfare, Govt. of India)*

H.M. Patel Institute of Rural Development,

Post Box No. 24, Opp. Nandalaya Temple,

### **Sardar Patel University**

Vallabh Vidyanagar 388120, Gujarat

Ph. No. +91-2692-230106, 230799, 292865; Fax +91-2692-233106

Email: [director.aerc@gmail.com](mailto:director.aerc@gmail.com); [directoraercgujarat@gmail.com](mailto:directoraercgujarat@gmail.com)

Websites: [www.aercspu.ac.in](http://www.aercspu.ac.in), [www.spuvvn.edu](http://www.spuvvn.edu)

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Vallabh Vidyanagar 388120, Dist. Anand, Gujarat, India.

***Prepared by***

Dr. Mahesh Pathak, Hon. Advisor  
Dr. S.S. Kalamkar, Director and Professor

***Compilation Team***

Shri Vinod Parmar, PA to Director  
Shri Deep Patel, Res. and Ref. Assitt (Lib.)

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Dr. S. S. Kalamkar  
Director  
**Agro-Economic Research Centre**  
For the states of Gujarat and Rajasthan  
(Ministry of Agriculture & Farmers Welfare, Govt. of India)  
H.M. Patel Institute of Rural Development,  
Opp. Nandalaya Temple, Post Box No. 24,  
**Sardar Patel University,**  
Vallabh Vidyanagar 388120, Dist. Anand, Gujarat.  
Ph. No. +91-2692-230106, 230799; 292865  
Mobile- 09822437451; 7383554616  
Fax- +91-2692-233106  
Email: director.aerc@gmail.com; directoraercgujarat@gmail.com

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## **Foreword**

The Agro-Economic Research Centre (AERC) for the states of Gujarat and Rajasthan was established in July 1961 at the Sardar Patel University, Vallabh Vidyanagar by the Directorate of Economics and Statistics, Ministry of Agriculture, Government of India, New Delhi. It was late Shri H.M. Patel (ICS retd.) who not only provided the vision for establishing such an Institute but also ensured the much needed support and encouragement for its growth at Vallabh Vidyanagar. AERC has been working as an integral part/ institution of S. P. University and enjoying autonomy status in its working.

The Centre has completed 50 glorious years (1961-2011) of its journey in 2011 marked by both achievements and challenges. During these years, the Centre has emerged as a strong policy feedback centre of the Ministry of Agriculture, Government of India due to hard work and strong commitment of the staff in the Centre. The focus of research effort in the initial stage was on comprehensive village surveys and resurveys in order to understand the process and direction of change at the village level. Subsequently, the emphasis of research has shifted to problem oriented studies. The Centre has by now (2017) completed 172 problem-oriented studies, 21 village surveys and 4 village resurveys. Most of these research projects have been taken up by Centre on the recommendation of the Government of India and State Governments of Gujarat and Rajasthan. The studies have come out with useful findings and policy implications for agricultural and rural development of the states of Gujarat and Rajasthan.

On the event of completion of five decades, Dr. Mahesh Pathak, who has served as Honorary Director of this centre during 1972-2006 and presently providing his services as Hon. Adviser, had proposed to have a compilation of annual reports of the Centre released during the last five decades.

While releasing this report, we remember with gratitude, late Shri H. M. Patel, I.C.S. (retd.) and former Finance Minister, Government of India: who always believed that agriculture and rural development should receive a very high priority in our development efforts; who was mainly instrumental in establishing this Agro Centre at Vallabh Vidyanagar; who took keen interest in the activities of the Centre and, as a member of its Governing Body (1961-1993), always encouraged it to conduct studies on an independent and objective basis. We also gratefully acknowledge the support received from all the Vice Chancellors and Registrars of our University and all the members of the Governing Body.

July 2017

(Dr. S.S. Kalamkar)  
Director and Professor

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## **List of Abbreviations**

AERC	- Agro-Economic Research Centre
SPU	- Sardar Patel University
VVN	- Vallabh Vidyanagar
MOA	- Ministry of Agriculture
DES	- Directorate of Economics and Statistics
GOI	- Government of Gujarat
CCS	- Cost of Cultivation Scheme
TECS	- Tata Economic Consultation Services
CACP	- Commission for Agricultural Costs and Prices
PPM	
CAS	- Centre for Advanced Studies
SAP	- Special Assistance Programme
UGC	- University Grants Commission
FMS	- Farm Management Scheme
GOG	- Government of Gujarat
NPG	- Narmada Planning Group
IAS	- Indian Administrative Services
CVM	- Charutar Vidya Mandal
FAO	- Food and Agriculture Organisation
SRO	- Senior Research Officer
RO	- Research officer
SRA	- Senior Research Assistant
RA	- Research Assistant
SA	- Statistical Assistant
HPO	- Hand Punch Operator
MTU	- Machine Tabulation Unit

# **My Memoirs on Five Decades of Agro-Economic Research Centre, Vallabh Vidyanagar**

***Mahesh Pathak<sup>1</sup>***

## **I. Background**

That as an institution Agro-Economic Research Centre, Vallabh Vidyanagar (AERC VVN) has crossed an important milestone of 50 years is an important landmark worth commemorating. I had the privilege of closely watching AERC, VVN right from day one for almost five decades. A wave of nostalgia sweeps over me as I think of the Centre which faced both formidable challenges and exciting opportunities during its long journey. As I think of this institution, lots of ideas pass through my memory lane on how and with what vision this Centre was established at VVN. Was the AERC VVN regarded as just a routine government scheme to provide every year four or five reports to the Government of India (GOI)? Those who shaped this Centre thought otherwise. It was visualized to perform a much wider and meaningful role for serving the cause of rural transformation. This note attempts to unfold the story about how this Centre has strived to serve a wider public purpose. These reminiscences may hopefully provide some lessons for the future ahead.

The Centre had made a humble beginning with staff strength of three and a half persons, a Deputy Director (Dr. V. S. Vyas), a Senior Research Assistant (Mahendra Desai), a part time Stenographer (Antony) and a peon (Joseph). The Centre was

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<sup>1</sup> Former Hon. Director (1972-2006) and current Hon. Adviser of the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar (Email: [mhpathaks@yahoo.in](mailto:mhpathaks@yahoo.in)).

occupying two small cabins in the huge newly constructed Humanities Building of the Sardar Patel University. The Centre gradually developed, and when the Cost of Cultivation Scheme (CCS) was established in 1970, the Agro Centre was occupying half of the ground floor space of the huge Humanities Building. The space occupied by the Centre was so large that it became a subject of debate on space allocation for many other departments located here and were growing over a period of time. Infrastructure facilities provided by the University were modest and yet the Centre strived to flourish as a leading research institute of its kind. This note is intended to acquaint the reader about the contribution that AERC, VVN has made in the field of survey based research for understanding the content and direction of rural transformation in India in general and in Gujarat and Rajasthan in particular.

AERC, VVN had the unique advantage of being located in an educational township which was primarily established to serve the cause of rural society. It was late Shri Vallabhbhai Patel, the first-Deputy Prime Minister of independent India, who had inspired two veterans - Shri Bhailalbhai Patel and Shri Bhikhabhai Patel - to promote education for serving the village people. Their pioneering efforts led to the creation of an educational township known as Vallabh Vidyanagar (1946).

Three important events preceded the establishment of AERC, VVN. First, the Sardar Patel University (known as Sardar Vallabhbhai Vidyapeeth in the initial years) was established in 1955 with a mission to serve the cause of rural transformation. Second, the Post Graduate Department of Economics, established in 1958, had also accepted agriculture and rural development as thrust areas for its teaching and research programme. Third, and perhaps very crucial, late Shri H. M. Patel, one of the ablest ICS officers of our country, decided to settle in Vallabh Vidyanagar in 1959. Putting aside many

alluring assignments which he could have easily obtained, he decided to serve the cause of rural development which was so close to his heart. These three developments provided an ideal setting for establishing AERC, VVN. It can be regarded as one of the most appropriate and satisfying activities to be undertaken in this township.

AERC VVN story began like this. Prof D. G. Karve, Prof. D. R. Gadgil and Dr S. R. Sen had been invited by Shri H. M. Patel to visit this campus when they came to Baroda in 1959 for attending the Annual Conference of the Indian Society of Agricultural Economics. It was during this visit to Vallabh Vidyanagar and to a nearby village (Kavitha) that the idea of establishing an institute for rural studies in this campus was mooted. It was late Shri H. M. Patel who, with his vision and foresight, persuaded the Ministry of Agriculture, Government of India to establish such a Centre at Vallabh Vidyanagar in order to strengthen the teaching and research activities in economics in the university campus. He always gave prime importance on building value based academic institutions in Vallabh Vidyanagar.

## **II. Unique Advantages AERC VVN:**

Several unique advantages enjoyed by this Centre may be noted here:

1. It was entrusted to the Sardar Patel University which had been primarily established for serving the cause of rural transformation.
2. AERC, VVN enjoyed necessary autonomy in its working. Its administrative integration with the university was established by keeping the university Vice Chancellor as Chairman of the Governing Body. Credibility for the Centre was ensured as it



was sponsored by the GOI and associated with the Sardar Patel University.

3. AERC, VVN was successfully launched because of H. M. Patel, who not only persuaded the GOI to establish the Centre at Vallabh Vidyanagar, but also assiduously nurtured and shaped its subsequent development to evolve as a Centre of excellence. For a man of his stature, AERC, VVN was a small institution, yet it was always close to his heart. During his long stay in Vallabh Vidyanagar (1959-1993) he invariably attended all Governing Body meetings, provided constructive suggestions and stubbornly defended the interest of AERC, VVN. He did not miss our governing body meeting even when he was the Finance Minister, Government of India!
4. When H. M. Patel asked Prof. M. L. Dantwala to suggest a suitable person to head the Centre, he had suggested the name of Dr. V. S. Vyas. AERC, VVN was singularly fortunate to have Dr. V. S. Vyas as its founder director. He was picked up at the young age of 30. Dr. Vyas will always be remembered for the admirable leadership that he provided with his robust positive outlook, his habit of hard work and his keen desire to strive for excellence. Not only did Dr. Vyas fully enjoy the excitement and euphoria of building a new institution, he also encouraged his young team to participate in this worthy endeavor.
5. Another major strength of AERC, VVN has been the association with its Governing Body of some of the most distinguished economists of our country such as H. M. Patel, M. L. Dantwala, M. V. Mathur, D. T. Lakhadawala, Prof. R. K. Amin, Prof. V. S. Vyas and Dr. Y. K. Alagh. The vision and foresight of these highly qualified and well respected individuals effectively

shepherded the smooth working and growth of this institution.

The University Vice Chancellor also has a key role to play in organizing the work of the Centre. By now about a dozen Vice Chancellors have chaired the Governing Body of this Centre and all of them have strived to ensure its smooth working. This healthy tradition was established right from the inception of the Centre. This was indeed a major advantage for the Centre.

6. Its academic integration with the Department of Economics was well planned and executed. A senior faculty member of the Department was appointed as Hon. Director but the established tradition was that he always worked as full time Director. I became Hon. Director of the Centre in 1972. Around 1984, keeping in view my other important assignments, the University had arranged for providing some additional support at the senior level. Two faculty members of the Department also served as Hon. Joint Directors, Dr. H. G. Patel for a brief spell and Dr. H. F. Patel for more than a decade. There were other senior faculty members of the Department, Dr. Arun Patel, Dr. Dilip Bagchi and Dr. Dilip Chauhan who were always available for project specific assistance never claiming any remuneration for the valuable services rendered by them. I continued to serve as Hon. Director of the Centre for a long period (1972-2006). Thereafter, two senior professors of the Economics Department, Dr. P.K. Singh (2006-2008) and Dr. H.P. Trivedi (2008-2010) rendered their useful services as Hon. Directors. Thus AERC, VVN had been, right from its inception, working in close collaboration with the Post Graduate Department of Economics of the Sardar Patel

University. They have grown together supporting each other for over five decades. This close academic linkage between the two proved to be highly rewarding and mutually beneficial to both.

The Department of Economics had also made a humble beginning. Initially it was located in a Commerce College known as B. J. V. Mahavidyalaya. All the six persons working in the Department, including a Professor (R K Amin), a Reader (V S Vyas) two lecturers (M P Bhatt, K S Gulati), a Research Assistant (Mahesh Pathak) and a Stenographer (George) were sitting in a single room provided by the college. In the initial years, hardly 8 to 10 students used to join for their M. A. Course. The Department was shifted in 1960 to the huge Humanities Building. Today around 150 students are enrolled for M.A. Course and around 25 students for their M. Phil and Ph.D.

How fruitful was the collaboration between the Centre and the Department will be evident from the fact that over the years the Department made significant progress in both its teaching and research programme. The UGC, recognizing its creditable past record, identified agriculture and rural development as its thrust areas and awarded its Special Assistance Programme (SAP) for three consecutive phases of five years each. The Department also received Rs. 40 lakhs from the UGC under its ASIHSS (Assistance for Strengthening Infrastructure in Humanities and Social Sciences) Programme. More recently, the UGC has recognized the Department as a Centre of Advanced Studies (CAS) in economics. During its long journey of over five decades, apart from providing rigorous teaching at the post graduate level, the Department

prepared more than 100 project reports and guided 43 M. Phil and 50 Ph. D. students.

7. In 1970, the Directorate of Economics and Statistics, Ministry of Agriculture, GOI had entrusted the Comprehensive Scheme to Study Cost of Cultivation of Principal Crops in Gujarat (CCS) to the Sardar Patel University which in turn asked AERC, VVN to organize this work.

Work on collecting cost of cultivation data for Gujarat had began in Vallabh Vidyanagar even before the CCS was launched in 1970. The Department of Economics of the university had organized Farm Management Scheme (FMC) of the Ministry of Agriculture, GOI for a three year period (1966-1969). Prof. R. K. Amin and later Dr. J. H. Adhvaryu were in-charge of this Scheme. A comprehensive three year consolidated report of this project was prepared by J. H. Adhvaryu and J. C. Patel. This experience proved to be of great help in organizing the work of CCS which had absorbed most of the experienced staff of FMC.

Only two Agro-Economic Research Centres (Vallabh Vidyanagar and Shimla) enjoyed the advantage of CCS attached to them. This was a big advantage for AERC, VVN with 60 field men of CCS posted in villages spread throughout Gujarat.

How important was the CCS network will be evident from the fact that data generated by this Scheme were used by the Commission on Agricultural Costs and Prices (CACP) established by GOI for fixation of minimum support prices.

How the data generated by CCS were useful for several other purposes as well comes to my mind. I vividly remember

several such examples, The Tata Economic Consultation Services (TECS) wanted cost of cultivation data for Gujarat for their economic appraisal study on Sardar Sarovar Project. Reliable and Systematic cost data for Gujarat were just not available elsewhere. We had supplied these data for Gujarat in specially designed form for a three year period ending 1976-77. As the regular compilation work of CCS was in full swing the DES, MOA had laid down the condition that TECS work should be done in extra hours. I vividly remember how a team of about CCS/AERC had worked from 7 p.m. to 12 mid night for 45 days to accomplish this herculean task!

Similarly, the Agriculture Commission constituted by the GOG (1987-90) wanted to study trends in the cost of cultivation in Gujarat. There was no other reliable source except CCS for this purpose. Based on CCS data for 42 crops for two year periods ending 1976-77 and 1984-85, Dr. A. S. Patel and Dr. H. F. Patel had prepared this report for the Agriculture Commission.

CCS data proved useful to Ph.D. Scholars also. Among them, I remember the name of Dr. P. K. Mishra, an IAS officer of Gujarat cadre, who subsequently became Secretary, Agriculture, GOI, had gone to IDS, Sussex for his Ph.D. work. He wanted some cost of cultivation data for Gujarat for his Ph.D. work which we had supplied as per his requirement.

Looking back, I have a feeling that data generated by CCS constitute a gold mine which deserves to be explored more extensively by the research workers.

8. Another unique advantage for AERC, VVN was the launching of a house journal which facilitated the publication of regular research output of both the Department of Economics and the



Agro Centre. The decision to publish a house journal was taken in early sixties in an informal meeting between H. M. Patel, R. K. Amin, V. S. Vyas and Mahesh Pathak. This led to the launching of *Arth Vikas* - A Journal of Economic Development in 1964. This journal has successfully completed 50 years of its publication in 2014 and it is celebrating this occasion by bringing out a special Golden Jubilee Issue. The Editorial Board of *Artha-Vikas* has decided to dedicate this Special Issue to H. M. Patel.

### **III. Major Achievements of AERC, VVN :**

Given its limited resource base, AERC VVN cannot boast the status of a high profile research institution. However, the Centre has emerged as a leading Centre of its kind in the country and has to its credit several noteworthy achievements which may be mentioned here:

1. **Research effort:** There are three noteworthy features of the research effort made by the Centre. First, the primary responsibility of AERC, VVN has been to undertake studies sponsored by DES, MOA, GOI. The focus of research effort has, therefore, always been on relevant research on subjects enjoying high national priority. Second, a remarkable feature of these studies has been that they have always provided an objective and independent feedback to the Government. Looking back, this feature appears to be the most satisfying as neither the Central nor the concerned State Governments (Gujarat, Rajasthan) have ever exerted any pressure in preparing these reports. Third, during its fairly long research journey spread over five decades, this Centre has built up a comprehensive and systematic data base relating to the rural economies of Gujarat and Rajasthan. Collection of high quality

field data has also been a widely recognized hallmark of AERC, VVN field research. When it comes to data collection from the field, even institutions of repute at times falter on this score. Decades of experience has made us realize that data collection relating to agriculture and allied activities calls for specialized expertise which needs to be nurtured over a period of time.

2. **Seminars and Conferences:** This Centre was not perceived as a routine government scheme requiring only submission of four to five reports to the Government of India. AERC, VVN had built up a very high reputation for organizing seminars and conferences (jointly with the Post Graduate Department of Economics) on a regular basis. Three guiding principles had been evolved for organizing such seminars.

First, important public policy issues were carefully selected for discussion. The usual convention had been that some seminal work done by the faculty would form the basis for organizing such academic interactions.

Second, these seminars were expected to cover a good cross section of participants including academics, administrators, policy makers and other concerned stakeholders. This made it possible to ensure that the seminar deliberations were focused on ground realities. Vallabh Vidyanagar seminars were attended by distinguished experts from all over the country.

Third, VVN seminars had adopted, as advised by H. M. Patel, a unique practice of preparing a statement of consensus at the end of the seminar. This was prepared on the basis of a careful review of seminar deliberations. This practice made the seminar deliberations focused, relevant and meaningful. The seminar proceedings were published in special issues of

*Arth-Vikas*, a journal of economic development published by the Department of Economics.

Among the conferences organized by the Centre, two were memorable and worth remembering. First, this Centre, which was established only in 1961, had taken a bold initiative of organizing the 24<sup>th</sup> All India Agricultural Economics Conference in 1964. Notwithstanding the obvious hardships of initial years, this event was successfully organized with Ashok Mehta, the then Deputy Chairman of the Planning Commission, as Conference President. Everybody, including eminent senior economists like D. R. Gadgil, D. G. Karve and M. L. Dantwala, had appreciated the event management. Another memorable event was the organization of 45<sup>th</sup> All India Agricultural Economics Conference in 1985. This event was a part of the Silver Jubilee Celebrations of AERC, VVN. Dr. Nilkanth Rath was the Conference President and it was inaugurated in the presence of distinguished guests such as V.K.R.V. Rao, H. M. Patel, V. Kurien and M.L. Dantwala. It was an event to remember with participants from all over the country. Several conferences of the Gujarat Economic Association were also successfully organized at Vallabh Vidyanagar (1971, 1985 and 1994).

Put together the Centre and Department have organized around 35 seminars/conferences during the period of five decades. Such an extension effort always provided excellent opportunities to the teachers and research workers to receive meaningful feedback from wider academic community and senior administrators and policy makers.

3. **Ph.D. Support Programme:** Remarkable close collaboration between AERC and Department of Economics for five decades

has generated significant external economies for supporting Ph.D. scholars working in the Department of Economics. Ph. D scholars easily obtained required secondary data from AERC data bank. Research scholars also benefited from the experience of available field survey schedules and tabulation schemes for data processing. AERC, VVN made a useful contribution for helping about 35 scholars to successfully complete their Ph.D. work. Around a dozen out of them were the faculty members of the Agro Centre who completed their Ph. D, while in service. All of them had scaled high peaks in their professional career. There were some faculty members in the Centre who never obtained a Ph. D degree, but who had produced several quality reports which were good enough to earn a Ph. D degree. Both Mahendra Desai, who was in the Centre during the first phase (1961-1977) and V. D. Shah, who had a fairly long tenure of 40 years at the Centre (1973-2013) provided informal guidance to many students in their Ph.D. work.

4. **Technical support to the Department of Economics:** The PPM Cell of Irrigation Department, Government of Gujarat had asked Dr Arun Patel of the Department of Economics to conduct about 30 socio-economic surveys for medium irrigation projects for World Bank assistance. While the Department had its own staff to undertake these studies, the AERC, VVN provided technical support as required. Similarly, support was made available, as and when required, for many other field survey based research projects undertaken by the Department.
5. **Technical Support to Government:** The GOI mandate for all Agro-Economic Research Centers was that they will provide, as

and when required, technical advice and support to government. The AERC, VVN had the privilege of rendering such services at the highest level. The Centre had, in its own modest way, strived to build bridges of understanding between ground realities and macro public policies. It had prepared evaluation reports on almost all major agriculture and rural development programmes launched by GOI since 1961. Based on intimate knowledge of local conditions and ground realities, they provided useful feedback to the MOA, GOI. The Centre served as eyes and ears of the Ministry in the true sense of the term. This Centre, along with all others, participated in the Common Studies Programme where all the Agro Centers jointly undertook studies on issues of national importance. Based on common objectives and methodology, these studies also provided valuable feedback to the Ministry.

AERC, VVN had undertaken some special studies sponsored by the Planning Commission. In the late sixties, this Centre had produced two seminal studies for the Planning Commission, one on Conditions of Stability and Growth in Arid Agriculture (1968) and the other on Significance of New Strategy for Small Farmers (1969). In late eighties, the Planning Commission had launched a planning programme based on agro-climatic conditions. As required by the Planning Commission, AERC, VVN had prepared profile as well as strategy reports for both Gujarat and Rajasthan (1988). More recently, the Planning Commission had asked this Centre to undertake evaluation of Comprehensive District Agriculture Plans (C DAP). This Centre had prepared evaluation reports for three districts each for Gujarat (2010) and Rajasthan (2011).

AERC, VVN had also provided technical support and advice at the state level. Usually the Centre carried out the



same studies for both Gujarat and Rajasthan. A pleasant redeeming feature of our experience has been that whenever our project teams visited Rajasthan, they invariably received a very warm and supportive response from the administration. Some of my senior colleagues, who often visited Rajasthan for their studies, always admired the excellent cooperation provided by Rajasthan administration. I am tempted to quote here an incident which reflects how prompt the administration was to our needs. Dr. Rajeshree Dutta and V. D. Shah, two of my senior colleagues, had gone to Rajasthan to collect data relating to their projects on State Budgetary Resources for Rajasthan Agriculture and Revised National Watershed Development Project. It so happened that a senior officer, not familiar with our work, insisted that the required data cannot be given unless they produce an official letter from the GOI! When this matter was brought to the notice of Ashish Bahuguna, who was then Principal Secretary, Rajasthan Agriculture, he promptly called all the concerned officers in his chamber and instructed them to provide the required data on a priority basis. Reports prepared for Rajasthan were regularly sent to all the concerned officers and they found the reports very useful. During our official visits to Rajasthan, we were also informed that inputs provided by our reports were used for policy purpose. In more recent years, the Rajasthan Government has been putting the main findings of some of our reports on their official website. The Directorate of Economics and Statistics of the Ministry of Agriculture had asked the Centre to prepare a long term review report on Rajasthan Agriculture, Dr. Dilip Bagchi had helped us in preparing this useful report. Principal Secretary, Agriculture, Rajasthan had invited the Centre to make a presentation of

this report before senior officials of agriculture department at Jaipur (October 2006). Dr. V. S. Vyas and several faculty members of the Institute of Development Studies, Jaipur also participated in this meeting. Rajasthan was as close to my heart as Gujarat and the Centre was always keen to provide whatever assistance it can on the basis of experience and expertise that it had acquired.

The Government of Gujarat made extensive use of expertise available with the Centre. Two Chief Ministers of Gujarat, Ghanshyambhai Oza and Chimnabhai Patel, visited Vallabh Vidyanagar to inaugurate two important seminars organized by the Centre, one on Development of Backward Regions (1972) and the other on Narmada Project (1992).

Sanat Mehta has been a well known figure in the public life of Gujarat who not only used to read our reports but, what is more, used these judiciously for his work. Recognizing the usefulness of our study on Inter-District Variations in Agricultural Development in Gujarat, Sanat Mehta, then Minister Planning, GOG, had asked the Centre to organize a workshop on this subject for senior officers of the Agriculture Department. A 17 page statement of consensus was released at the end of two days workshop making concrete region specific and crop specific recommendations for future development (1983).

As required by the World Bank, GOG had constituted the Narmada Planning Group (NPG) for organizing various technical, socio economic and environmental studies required for this mega project planning. A unique opportunity to serve a public purpose came our way when in November, 1983, B. J. Desai, Special Secretary, GOG wrote a letter to our Vice Chancellor requesting the university to depute me for serving

as a full time Executive Member of NPG. Our Vice Chancellor, Prof. K. N. Shah, tried to persuade me to accept this coveted post, which was informally equated to the post of Secretary by GOG. While fully recognizing the importance of this assignment and the need for rendering services for a worthy cause, I was of the view that whatever work that I was doing at Vallabh Vidyanagar was also important and, therefore, I should not accept any outside assignment at the cost of my work at Vallabh Vidyanagar. Hence, my submission to GOG was that I am willing to provide my services on a part time basis. I also assured GOG that even though my headquarter will be at Vallabh Vidyanagar, I would spare all the time required for attending to NPG work. I kept my promise till the end of my tenure, spending the prime time of my life for a mega project so important for Gujarat and for the country. GOG also endorsed my view that it would be in the interest of both university and GOG if I serve on a part time basis. It was decided that my expertise and experience will be used for more specific and programme oriented work and not for routine day to day work. I joined, NPG in May, 1984 with an initial offer from government for one year, which it continued for 15 years (1984-1998). As I used to spend on an average 3 days per week for NPG work, Gandhinagar Circuit House virtually became my second home for 15 years! A large number of research institutes and universities (including SPU and AERC, VVN) were involved in preparing numerous studies required for this project. Working together as part of a team with Secretary level officers for as long as 15 years was an experience that one would like to cherish for a life time. My association with NPG was very rewarding and it served in several ways the mutual interest of both GOG and University.

Gujarat agriculture was facing a crisis situation following three consecutive drought years in mid eighties. In June 1987, I received a surprise telephone call from Amar Singh Chaudhary, then Chief Minister of Gujarat, enquiring whether I will be willing to serve as Chairman of Agriculture Commission that the government wanted to constitute. Recognizing the work done by AERC, VVN, I was invited to be the Chairman of the first ever Agriculture Commission constituted by the Government of Gujarat (1987-90). This Commission had arranged for many studies and it made an in-depth review of agriculture by visiting each district and arranging dialogues with farmers, administrators, academics and representatives of the people. AERC, VVN had also prepared some useful reports for this Commission such as Terms of Trade for Gujarat Agriculture, Trends in the Cost of Cultivation in Gujarat and some district profiles of agriculture in Gujarat. An Empowered Committee constituted by the GOG to review this report had accepted nearly 80 to 85 per cent of the recommendations made by the Commission for implementation.

Government of Gujarat has been regularly inviting representatives of AERC VVN for their annual meetings to discuss issues relating to recommendation of minimum support prices. AERC, VVN was also represented on a number high level expert committees constituted by the GOG. Such an interface with the government, nurtured through productive linkages, proved to be of great mutual benefit.

More recent experience of AERC, VVN also indicates that it continued to provide feedback for public policy in Gujarat. It was during the tenure of Narendra Modi as Chief Minister and Bhupendrasinh Chudasama as Agriculture Minister that

the signs of rapid transformation in Gujarat agriculture became visible on the horizon and success stories about the dramatic turnaround in Gujarat agriculture began to be scripted. Bhupendrasinh, a well known figure in the public life of Gujarat, admired the work of AERC, VVN and used the inputs provided in our reports.

Around 2000, the Directorate had asked the Centre to prepare a long term review report on Gujarat agriculture. Dr. Arun Patel had prepared this useful report covering the period 1960-2000. Bhupendrasinh himself took the initiative to invite us for making a presentation before the senior officers of the government and agriculture universities (November, 2006).

Bhupendrasinh had also adopted a healthy practice of arranging every year a meaningful dialogue between the senior government officers and a couple of senior experts from Gujarat. The usual procedure followed in these meetings was that Secretary, Agriculture made a presentation on the work done in the past year and work to be undertaken in the next year. Thereafter, invited experts gave their comments. AERC, VVN was invariably invited for these meetings.

Shri Narendra Modi, then Chief Minister of Gujarat, had introduced an innovative practice of organizing every year (since 2003) Chintan Shibirs for Ministers and IAS Cadre Officers to promote good governance. There were departmental Chintan Shibirs as well where the Chief Minister himself, the concerned Minister, the Chief Secretary and all Class-I officers used to remain present. I was invited to address one such Chintan Shibir organized by the Department of Agriculture.



#### **IV. The Institute Umbrella :**

It will be evident from the narration so far that an enduring and very fruitful relationship had been established between the Post Graduate Department of Economics and Agro-Economic Research Centre. The academic integration between the two was effectively ensured by appointing a senior faculty member of the Department as Hon. Director of the Centre. It turned out to be a mutually beneficial and highly rewarding unique partnership which enabled both of them to flourish together.

Both the Department and the Centre were successfully working together in the Humanities Building of the University for several decades. However, our past experience clearly indicated our future requirements: arrangements were necessary to ensure that they work together on a permanent basis: they have to establish their separate identity and they should enjoy reasonably good modern amenities required for their smooth working. These basic requirements could not have been fulfilled without a separate building. I had prepared, in consultation with my colleagues, a proposal to put both the Department and the Agro Centre under the common umbrella of an Institute. The idea of the Institute was, in a sense, a pragmatic, down to earth response to the pressing requirements of this flourishing partnership. The academic environment provided by a complex of institutions located in and around Vallabh Vidyanagar offered ample opportunities for developing a Centre of excellence for teaching and research relating to rural economy in this campus. Our university welcomed this idea on the condition that the funds required for a separate institute building will be mobilized by us. I sought the advice and guidance of H. M. Patel on this important issue. He appreciated the merit of this idea and encouraged me to go ahead with the fund raising effort. Other senior economists associated with the Centre including

M. L. Dantwala, D. T. Lakhadawala, V. S. Vyas and Y. K. Alagh also supported the Institute proposal.

We were faced with two major problems in implementing this project proposal. First, we were required to mobilize funds required for the Institute building. This fund raising exercise was a unique experience by itself. When an ambitious project is launched one is bound to encounter some incorrigible prophets of doom. There will be others who just display benign neglect for such initiative. It was an established fact that both the Department and the Centre had successfully worked together for several decades. That two such fully funded institutions, one by the UGC/State and the other by GOI, constituted a solid potential material for an Institute was neither understood nor appreciated by several people whom we approached. However, when you are working for a worthy cause, you come across some angels also. H. M. Patel was one of them. He not only appreciated the proposal but also backed the idea.

Despite some initial setbacks, the idea was relentlessly pursued. Dr. Y. K. Alagh and I had gone to Delhi to meet Dr. Manmohan Singh who was then Finance Minister of GOI. He appreciated the merit of our proposal and arranged for providing some financial support for the Institute building. Similarly, H. K. Khan (former Chief Secretary, GOG) and Dr I. G. Patel also appreciated the proposal and encouraged us by providing some financial support from GSFC Research Foundation. Our fund raising efforts helped in mobilizing 50 per cent of the funds required for the Institute building. The university was good enough to contribute the balance 50 per cent of the total amount required (Rs. One Crore).

The second major problem was related to the location of the Institute Building. All of my colleagues wanted to have this building close to the main University Campus. H. M. Patel took keen interest in this matter and persuaded the university to provide us space

close to the main campus. The University did provide us space close to the main campus. Unfortunately, the building plan proposed for the Institute did not fit into the allotted site. Other suggested sites, though large enough, were not favoured because they were not within the main campus. At this stage, I had a chance meeting with Dr. C. L. Patel who had succeeded as Chairman of the *Charutar Vidya Mandal* after the sad demise of H. M. Patel. I briefed him about the progress made by us in our project and also indicated the major hurdle of space faced by us. His response was prompt and dramatic. He said to me “Dr. Pathak, we have a site close to the main campus which we have earmarked for another project. However, you are far ahead in your project work and as the university has decided to associate the name of H. M. Patel with this Institute, I am willing to give this land to the University for this worthy cause! “

The Charotar Vidya Mandal gave to the University a large 2660 sq. yard plot (current value around Rs. 4 crore) on a 99 years lease with a token rent of Rs. 1 per year. This was indeed a fine gesture of goodwill that needs to be remembered forever! The building project was delayed due to various constraints. However, ultimately we succeeded in providing a common Institute Umbrella (**H.M. Patel Institute of Rural Development**) for the Department of Economics and Agro Centre. It is a thrice blessed Institute that we have inherited. First, the Institute had the blessings of late Shri H. M. Patel who appreciated the idea and provided much needed backing for this dream project. His vision and foresight and his rock solid support and encouragement had played a major role in shaping the Department of Economics and Agro-Economic Research Centre. Recognizing his valuable contribution, the Sardar Patel University had decided to associate his name with this Institute. Second, Pramukh Swami Maharaj, a well known saint of Gujarat, laid the foundation stone of our building. As he was aware about our

ambitious project, he readily agreed to come and give his blessings for future progress. Third, the Institute building was inaugurated by **Hon. Chief Minister of Gujarat Shri Narendra Modi on Tuesday, 25 December, 2001.** Expressing his good wishes, he admired the valuable public services rendered by H. M. Patel and had congratulated the university for associating his name with the Institute.

#### **V. Reinventing the Agro Centre VVN:**

The Agro Centre network had been earlier reviewed by two high level expert committees headed by Prof. M. L. Dantwala (1968) and Shri R. N. Paudwal (1984). These expert committees had appreciated the work done by the Centers and recommended measures for strengthening this network. Need for reviewing the work of Agro Centre's was again felt around 2000, when a Planning Commission Committee questioned the need for AERC network. As a result two important developments followed. The Ministry of Agriculture had taken two important measures to serve this purpose.

First, S. M. Jharwal, Principal Adviser in the MoA took the initiative to compile and publish in two volumes 'Glimpses of Agricultural Economy of India' (2008) highlighting the main findings of studies undertaken by the Centers during 2000 to 2004. Although activities of the Centers during this period were somewhat curtailed due to ongoing review process, contributions contained in these volumes were widely acclaimed by the academics and policy makers. In his message to this publication, Dr. P. K. Mishra, then Secretary Agriculture, GOI had indicated that "AERC's would be entrusted with the task of reviewing and monitoring the performance of major flagship programmes of the Government of India being run for agriculture and allied sectors".

The Second important development was that the Planning Commission constituted a Technical Advisory Committee (TAC) under the Chairmanship of Dr. Abhijit Sen, Member, Planning Commission to reassess the role of AERC network (2006). The Ministry had accepted the recommendation made by this expert group to have a core staff of 15 persons (including the new post of full time Professor/Director) for each Centre.

Following this decision, the AERC, VVN had filled up all the posts on a priority basis within one year. Creation of the post of full time Director was perceived as a golden opportunity to rejuvenate the Centre. It was realized that if the Centre aspires to flourish on a long term basis, it has to make conscious and systematic efforts for reinventing itself. This note will be incomplete without recording the strenuous efforts made by the new Director Dr. S. S. Kalamkar and his young team to reinvent AERC, VVN. The Centre was able to take several initiatives in this direction because the Vice Chancellor, Dr Harish Padh, himself a scientist of international repute, fully backed these efforts. Some of the major initiatives taken may be highlighted here.

- A. An upgraded website of the Centre ([www.aercspu.ac.in](http://www.aercspu.ac.in)) was launched on 1<sup>st</sup> July, 2013 - by Dr. Sudarshan Iyengar, Vice Chancellor of Gujarat Vidyapeeth. Entire infrastructure facilities available in the Centre have also been upgraded. A modern well equipped Seminar Hall was inaugurated by the Vice Chancellor Dr. Harish Padh on 28<sup>th</sup> January 2013. Each research worker has been provided with a computer, printer and internet connectivity. Library facilities have been upgraded and automation is in advanced stage to scan all AERC reports.
- B. Concerted efforts have been made to enrich the academic environment in the Centre and the Department of Economics.

1. The Centre has, jointly with ISEC Bangalore, undertaken an evaluation study of *Rashtriya Krishi Vikas Yojna* (RKVY) in Gujarat and Rajasthan. Another study on the evaluation of check dam, entrusted by the GOG, has been undertaken jointly with the Department of Economics of SPU. The Centre is completing a major study entrusted by DES, GOG (involving around 2000 households) on estimation of changes in income and cost of production owing to changes in inputs and hybrid seeds for major crops of Gujarat.
2. Some faculty members have been recognized as Ph. D. guides. Faculty is encouraged to undertake teaching work and supported to attend seminars and conferences.
3. The Centre is regularly celebrating its Foundation Day on 1<sup>st</sup> July by inviting eminent scholars to deliver lectures. In this series, Dr. Sudarshan Iyengar gave a talk on “Agro-Economic Research Centre: Need to Introduce Fresh Agenda” (2013) and Dr. Tushaar Shah on “Secret of Creating High Performing Knowledge Institutions” (2014).
4. In order to encourage young scholars to strive for excellence, a new lecture series on “Shaping a Research Worker: My Experience” - has been launched. Dr Tushaar Shah (2013) and Prof. V. S. Vyas (2014) shared their valuable experience under this programme for the benefit of faculty members of the Agro Centre and Department of Economics.
5. With the creation of the post of full time Director in AERC, it was necessary to establish some linkages through which AERC/Department can continue to work together. The Sardar Patel University was good enough to accept my proposal to establish H. M. Patel Memorial Fund for which I had made a modest donation of Rs. 1 lakh as seed money. With this fund, the university has recently instituted H. M. Patel

Memorial Lecture series to be jointly organized by the Centre and Department. First lecture under this series was delivered by Shri Hasmukh Shah on 'Independent India: Good Governance - Aspirations and Reality' (2014).

6. A Faculty Seminar Series and a Working Paper Series have also been launched. The Centre and Department have accepted an excellent suggestion made by Dr. Tushaar Shah to organize a monthly seminar series in collaboration with the International Water Management Institute (IWMI). This seminar series, open for all interested academics, is intended to enrich the academic environment in the university campus.
7. Annual two day training programme for field workers of the CCS are regularly organized at Vallabh Vidyanagar.
8. The Centre also has on its agenda a programme to introduce a 'Course on Economic Analysis and Report Writing' for young researchers.
9. A National Workshop involving all the universities associated with the Cost of Cultivation Scheme was organized during 21-22 August 2014.
10. The Centre will be organizing in the first week of December, 2014 the 28<sup>th</sup> National Conference of the Indian Society of Agricultural Marketing. This event will be organized under the auspices of the Sardar Patel University and Anand Agriculture University. The 45<sup>th</sup> Annual Conference of the Gujarat Economic Association will be organized by the Centre in February, 2015.
11. A two day seminar on 'Water Management in India: Special Focus on Western India' to be jointly organized with the International Water Management Institute (IWMI), is also in the pipe line.

The above account clearly reflects the high level of motivation with which the Centre has been working to celebrate its Golden Jubilee period. However, the exhilaration generated by this festive spirit is mixed with anxiety as the GOI has taken a decision to discontinue providing its financial support to Agro Centers beyond the 12<sup>th</sup> Plan (2016-17). The suggested alternative of replacing such a dedicated and cost effective AERC network by an adhoc and uncertain system of competitive bidding may prove counter-productive and hence may not be advisable. The existing arrangement for the Agro Centre - sponsored by the GOI and association with a university system-ensures credibility for this network and, therefore, needs to be preserved.

In retrospect, when one looks back at the record of Agro Centre network over the past five decades many knowledgeable experts, including the three high level expert committees constituted by the GOI, have found their overall performance quite creditable. In fact, the latest high level expert committee headed by Dr. Abhijit Sen (2006) has considered AERC Centers /Units as “unique institutions with all India coverage and experience of about 50 years.” This expert committee had concluded that, “if this system is closed down, no other agency in the country - Governmental or Non-Governmental-can fill up the gap in providing unbiased information to the government in a professional manner. The loss will, therefore, be incalculable and irreversible”. It had, therefore, stressed the need for strengthening this network. As a result, one expected this network to take off and flourish with a bright future. Paradoxically this network is heading for an anti-climax. One only hopes that wiser counsels would prevail and both the Directorate of the MOA and concerned universities will make positive efforts to enable this network to flourish.

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## Introduction

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Noted economist Dr. V.K.R.V. Rao had mooted the idea of establishing a network of Agro-Economic Research Centres in India to study the problems of agrarian economy and, in the process, to build up a cadre of trained agricultural economists. To begin with, four such centres were established in the year 1954 at Delhi, Vishwa-Bharati, Chennai and Pune. It was decided to attach these centres to Universities in order to provide academic environment and also to lend credibility to them. As the objective of establishing the Sardar Patel University (SPU<sup>2</sup>) at Vallabh Vidyanagar was to serve the cause of rural development, the Ministry of Agriculture (MOA), Government of India (GOI) decided to establish one such Agro-Economic Research Centre (AERC) at Vallabh Vidyanagar (VVN) in the year 1961. Shri H.M. Patel I.C.S. (Retd.) was mainly instrumental in persuading the GOI to establish such a centre in this university township. Since its establishment in 1961, the centre has been working as an autonomous Associate Institute of the university. Subsequently, in the year 1970, the MOA, GOI also entrusted to the Sardar Patel University to undertake a major data collection project '*Comprehensive Scheme for Studying the Cost of Cultivation of Principal Crops in Gujarat*' known as *Cost of Cultivation Scheme (CCS)*. The Sardar Patel University asked the Agro-Economic Research Centre to organize the work of this major project also.

The AERC VVN has crossed its Golden Jubilee milestone in the year 2011 and over the years, it has shaped as one of the leading institute of its kind in the country. The AERC VVN was singularly fortunate in having Dr. V. S. Vyas as its founder Director. During the crucial first decade of its evolution (1961-70), it was because of his

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<sup>2</sup> Sardar Patel University was earlier known as Sardar Vallabhbhai Vidyapeeth.

pioneering efforts that this centre was able to establish rich traditions of research in agricultural economics. This tradition was nurtured in the subsequent phase of three and half decades by Dr. Mahesh Pathak who served as Hon. Director of AERC during 1972-2006. The centre was equally fortunate to have on its Governing Body eminent personalities such as Shri H. M. Patel ICS (Retd.), Prof. M. L. Dantwala, Prof M. V. Mathur, Prof. D. T. Lakdawala, Prof. R. K. Amin, Dr. V. S. Vyas and Dr. Y. K. Alagh. When the Agro Centre was entrusted at the university, Shri Babubhai Jashbhai Patel (a noted Gandhian who subsequently became the Chief Minister of Gujarat) was the Vice-Chancellor. He, as Chairman of the Governing Body of the Centre, established healthy traditions of ensuring autonomy for the Centre and for providing much needed support for its smooth functioning. All the Vice-Chancellors that followed have maintained this tradition.

The jurisdiction of AERC VVN covered the states of Gujarat and Rajasthan. Its mandate covered the following objectives.

1. To make continuous study of the change in rural economy by means of surveys of villages each year, to be repeated after an interval of five years;
2. To conduct adhoc investigation on problems of interest to the Ministry of Agriculture and Irrigation and the State Governments under their jurisdiction;
3. To undertake research on fundamental problems relating to the agricultural economy of the country; and
4. To give technical advice to the Government of India and to the State Governments on such important issues as, with mutual agreement, may be referred to the Centre.

In the initial period of its working, the focus of research was on Village Surveys. Since mid sixties, the focus all along has been on policy oriented issues enjoying high national priority with the GOI. This Agro-Centre has so far completed 21 village surveys, 4 village resurveys, four studies on Agro-Climatic Zones (for Planning Commission, GOI) and 163 problem oriented studies (see, list of studies completed appended at the end of this report). This report highlights the research effort made by the Centre during the period of 50 years, i.e. from 1961 to 2011.

The studies submitted over the period are covered the following areas<sup>3</sup>.

- II Village Surveys
- III Planning and Development
- IV Prices and Incomes Policy
- V Special Development Programmes
- VI Seed Supply Systems
- VII Trends in Operational Holdings & Land Use Planning
- VIII Irrigation Development
- IX Watershed Development
- X Agricultural Credit
- XI Agriculture Marketing
- XII Soil Testing
- XIII Farm Mechanization and Training
- XIV Cooperative Farming Societies
- XV Saving and Investment in Agriculture
- XVI Crop Farming/Dairying Relation
- XVII Economics of Milk Production
- XVIII Famines and Relief
- XIX Public Distribution System

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<sup>3</sup> Please see AERC Report No. 153 for further details.

- XX    Viable Entrepreneurship Trade for Women
- XXI   Farm Employment and Rural Non Farm Employment
- XXII   Other studies

### ***Cost of Cultivation Scheme***

Studies on cost of production of agricultural commodities have been of interest to research workers and policy-makers. The need for reliable and representative estimates about cost of production of agricultural crops is obvious for formulating an appropriate strategy for planned agricultural development.

In a vast country like India with marked variations in agro-climatic conditions, it becomes essential to collect State-wise, region-wise data on cost of production of various crops on a continuous basis. Recognizing the importance of such studies, the Directorate of Economics and Statistics, Ministry of Agriculture, Government of India, evolved a permanent arrangement for collection of cost of cultivation data on a continuous and uniform basis for all important crops in the country. The Directorate of Economics & Statistics decided to establish the Comprehensive Scheme for studying the cost of cultivation of principal crops in different states of India in 1968-69. The Directorate entrusted one such cost scheme to the Sardar Patel University for collecting cost of cultivation data in Gujarat. The University entrusted this Scheme to the Agro-Economic Research Centre. Since 1970, the Agro Centre and the Comprehensive Scheme are working together in close collaboration for serving the needs of the Directorate of Economics and Statistics of MoA, Government of India.

The data base generated through the “Comprehensive Scheme for Studying Cost of Cultivation of Principal Crops” is used not only for the primary purpose of providing cost estimates for determination of Minimum Support Prices (MSP) but for a wide

variety of other important purposes like 'Compilation of National Accounts Statistics', Wholesale Price Indices (WPI) and research studies relating to cost of cultivation and farm income.

Up to 1982, cost of cultivation data in Gujarat were collected from 480 sample cultivators spread over 40 clusters of villages through cost accounting method. Under the old arrangement (known as single crop approach) the clusters were changed every year retaining only a sub-sample of 10 to 20 clusters. Since 1983, the single crop approach has been replaced by crop complex approach under which the number of clusters has been increased from 40 to 60 thereby providing a wider and varied base for generation of reliable estimates. Now eleven principal crops of Gujarat viz., paddy, bajra, maize, mong, tur/arhar, groundnut, sesamum, cotton, wheat, rapeseed & mustard and onion are being studied continuously and simultaneously for three consecutive years in the same clusters of villages. At present, there is a sample of 600 cultivators (10 each from selected clusters) drawn from different size groups of holdings. The five size groups are: below 1.0 hectare, 1.0 to 2.0 hectare, 2.0 to 4.0 hectare, 4.0 to 6.0 hectare, 6.0 hectare and above. The work of Scheme is being looked after by 78 persons of which 60 are permanently posted in the villages spread over entire State of Gujarat. This Scheme is being fully financed by the Ministry of Agriculture and Farmers Welfare, Government of India.

The details on year wise study crop studied under single crop approach during the period from 1971-72 to 1980-81 is presented in Table 1 and details on number of block wise study crops studied during the period from 1981-84 to 2014-17 is presented in Table 2.

**Table 1: CCS Gujarat- Year wise study crop under single crop approach 1971-72 to 1980-81**

Sr. No.	Year	Main Study Crop	No. of Cluster	Other Study Crop 1	No. of Cluster	Other Study Crop 2	No. of Cluster	Total Cluster
1	1971- 72	Bajra	40	-	-	-	-	40
2	1972- 74	Groundnut	30	Bajra	10	-	-	40
3	1974- 76	Cotton	22	Bajra	10	Cotton	8	40
4	1976- 77	Jowar	20	Bajra	10	Cotton	10	40
5	1977- 78	Bajra	22	Cotton	10	Groundnut	8	40
6	1978- 79	Groundnut	32	Bajra	8	-	-	40
7	1979- 80	Cotton (LS)	20	Groundnut	10	Bajra	10	40
8	1980- 81	Cotton (LS)	20	Bajra	10	Groundnut	10	40

**Table 2: CCS Gujarat- Block wise Study Crops 1981-84 to 2014-17**

No.	Year	Study Crop	No.
1	1981-84	Bajra, Groundnut, Cotton and Jowar	4
2	1984-87	Bajra, Groundnut, Cotton, Tur and Onion	5
3	1987-89	Bajra, Groundnut, Cotton, Tue and Tobacco	5
4	1990-92	Bajra, Groundnut, Cotton, Tur, Jowar and Wheat	6
5	1993-95	Bajra, Groundnut, Cotton, Tur, Jowar, Wheat, Sugarcane and Rape & Mustard Seeds	8
6	1996-99	Bajra, Groundnut, Cotton, Wheat, Tur, Sesamum and Rape & Mustard Seeds	7
7	1999-02	Bajra, Groundnut, Cotton, Wheat, Tur, Sesamum and Rape & Mustard Seeds	7
8	2002-05	Bajra, Groundnut, Cotton, Wheat, Tur, Sesamum, Rape & Mustard Seeds and Onion	8
9	2005-08	Bajra, Groundnut, Cotton, Tur, Sesamum, Wheat, Rape & Mustard Seeds, Paddy, Maize and Onion	10
10	2008-11	Bajra, Groundnut, Cotton, Tur, Sesamum, Wheat, Rape & Mustard Seeds, Paddy, Maize and Onion	10
11	2011-14	Bajra, Groundnut, Cotton, Tur, Sesamum, Wheat, Rape & Mustard Seeds, Paddy, Maize and Onion	10
12	2014-17	Bajra, Groundnut, Cotton, Tur, Moong, Sesamum, Wheat, Rape & Mustard Seeds, Paddy, Maize and Onion	11

In this report, we have tried here to put all the annual reports of the Centre published during last five decades during the period from 1960-61 to 2010-11. Thereafter, we have continued the systematic publication of report for every year.

## **WORK DONE DURING THE DECADE (1961-62 to 1970-71)<sup>1</sup>**

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Mr. Chairman, Ladies and Gentlemen:

It gives me immense pleasure to welcome you amidst us on the occasion of the annual day celebrations of the centre. This annual day has a little more meaning and significance for us because the Centre completes today the first ten years of its existence and now enters the first year of the second decade. In the case of human, the first ten years, of life are part of the childhood but institutions have a shorter childhood than humans even though they - quite a good number of them, at any rate - have longer life span than human. It would be appropriate to say that the first ten years in the life of an institution are the formative years and hence are of the most vital importance so far as the character, the vitality and the future potential of the institution are concerned. Some of us who have had the privilege of being associated with the Centre ever since its establishment ten years ago have a feeling of standing on the threshold of a new era, of entering a land full of hope and promise though also beset with formidable difficulties challenges. This feeling is based on the kind of work that we at the Centre have done during the decade that has just fades out. It is my privilege to present to you a brief record of our work during the last ten years.

### **Genesis of the A.E.R. Centres**

The information gap pertaining to the agricultural economy of our country, which was keenly felt while drawing up schemes of agricultural development for the First Five Years Plan, established the policy need to promote institutions regularly and exclusively devoted to agricultural economic research in different parts of the country. Consequently, the Government of India sponsored and undertook to finance, wholly or substantially many research institutions; the A.E.R. Centres also owe their existence to the above policy.

The first four A.E.R. Centres were set up in 1954 at Poona, Delhi, Shantiniketan and Madras. These Centres were headed by distinguished economist like the late Prof. D. R. Gadgil, Professor V.K.R.V Rao and Professor Balkrishna. Encouraged by the initial success of this programme, the Government of India decided to

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<sup>1</sup> Prepared by Dr. Mahendhra Desai, Officer Incharge & Deputy Director of the Centre on the occasion of the Tenth Annual day celebration of the centre.

cover many more regions of the country by such Centres. As a matter of policy, these Centres have been attached to Universities or to Agricultural colleges, so as to ensure on one hand, close acquaintance and hence deeper understanding of the problems of the regions under the jurisdiction of the Centres and independence and objectivity in the conduct and reporting of finding of researches, on the others.

Ours was the seventh in the series of the A.E.R Centres set up by the Government of India. At present there are nine such Centres in the country. Generally, each Centre works for two or three states. These Centres have mainly four objectives to fulfill:-

1. To make continuous study of the change in rural economy by means of surveys of villages each year to be repeated after an interval of five years;
2. To conduct adhoc investigations on problem of interest to the Ministry of Food & Agriculture and the state government under their jurisdiction;
3. To undertake research on fundamental problem relating to the agricultural economy of the country; and
4. To give technical advice to the Government of India and to the State Government on important issues as, with mutual agreement, may be referred to the Centres.

### **Staff and Equipment**

The centre carries out its research programme with the help of carefully selected investigational and analytical personnel. The Centre began with a small staff of 15 in 1961, headed by the Deputy Director and officer-in-charge. Since then there has been considerable increase in the strength of staff at all levels. Today, the strength has goes up to 108. No doubt, a good many of these posts are temporary and have been sanctioned for the special research schemes or projects entrusted to the centre by different agencies. Even so, the expansion of staff is certainly remarkably large.

The centre has acquired a set of 80 column Electronic Data Processing equipment, in addition to hand-operated calculation machines, to process and tabulate the collected survey data accurately and quickly.



The researchers of the Centre have been both numerous and varied. Two distinct phases in the career of the Centre can be discerned as far as the nature of the research projects undertaken by the Centre is concerned. In the initial years, there was a good deal of emphasis on the study of rural change by means of village survey and resurveys. Undoubtedly, the centre did undertake problem oriented researches during these years, both on its own and at the instance of other agencies. However, in terms of apportionment of resources and effort, the scheme of continuous village survey was the more important activity. We have carried out 21 bench-mark village survey, 11 in Gujarat and 10 in Rajasthan; of this two, one each in Gujarat and Rajasthan have been resurveyed, too. A wide variety of forces of changes have been studied through these village surveys. In Gujarat, for example, the forces of change studied were: impact of activities undertaken under the Special Multipurpose Community Development Project in the tribal areas of Sabarkantha district; the likely impact of the establishment of oil refinery and other petro-chemical industries at Koyali near Baroda; the impact of the Intensive Area Scheme of the Khadi and Village Industries Commission near Junagadh; the impact of the Amul Dairy on the rural economy of the Khaira district.

Similarly, in Rajasthan diverse forces like the advent of irrigation in a hitherto arid area, the impact of Gramdhan Movement on a village economy, the impact of the scheme to develop sheep and wool industries in the semi-desert regions, the likely change in a village economy as a result of exposure of the village to the outside world due to the starting of railway line, have been studied.

This phase lasted up to 1965-66 after which the problem-oriented studies gained in importance at the expense of continuous village survey programme. This shift in emphasis came about because on one hand, the A.E.R Centre and the Directorate of Economics & Statistics realized the limited utility of the continuous village survey; on the other hand the problem oriented studies undertaken by the Centre were found quite useful in policy making. This shift in emphasis has been amply justified by the many useful research studies on specific problems of topical importance which the Centre conducted in the latter years. About 30 studies of this type were undertaken by the Centre in the last decade of which 23 have been completed. The contribution which this Centre has made in bringing out these useful research studies has been widely acknowledged both at home and abroad, and both by policy makers and by academic circles. Mention may be made, in particular, of the studies on Agricultural Labour, Fair Price Shops, Cooperative Farming, High Yielding Varieties Programme, Significance of the

New Agricultural Strategy for Small Farmers, Long Term Agricultural Finance, and Problems of Growth and Stability in Arid Agriculture. The utility and value of the Centre's researchers were appreciated quite early as evidenced by the fact from the very early stage the Centre has been approached by various agencies for undertaking studies of problems which were of interest to them. During the decade, the centre was entrusted with 12 research studies or schemes by various state and national level agencies. This year we have been entrusted with a research project on "Institutional set up for Agricultural Development" which is a part of the global project jointly sponsored by the Overseas Development Institute, London and the Reading University in the U.K.

### **Publications**

It has been the policy of the Centre to public as many studies as possible out of the financial resources of the Centre subject, of course, to the studies being found suitable for publication by an outside expert. It must be mentioned, though, that the financial constraint has made it difficult for the Centre to publish all the studies that deserve publication. So far, five studies of the Centre have been published; two of these were published by the Sardar Patel University, two by the Centre itself and one by M/S. Thacker & Co., Ltd. Bombay. Besides the full-fledged research studies, staff members also prepare research papers and articles for conference and seminars, and leading economic journal.

### **Assistance to other Institutions**

The Centre also provides help to other institutes in conducting their research studies whenever it is approached. The help is provided in the form of consultation, framing of questionnaires, tabulation of data, and provision of services of the members of the staff on loan basis. Among the institution that have been helped may be mentioned the National Cooperative Union of India, the Department of Economics of the Sardar Patel University and the Gujarat University, the Gujarat State Fertilizers Company, Faculty of Education, M. S. University of Baroda, Farm Management Centre, Vallabh Vidyanagar, etc. Similar help has also been provided to research scholars of the Indian and foreign Universities.

### **International Assignment**

During the last ten years Dr. Vyas was approached by many international agencies and institutions to help them in their various activities. He served as a Technical Secretary at the World Land

Reforms Conference organized by the F.A.O. at Rome, in 1966, acted as a consultant and lecturer at the F.A.O. Inter Regional Seminar on Cooperative Farming held in New Delhi in May 1966 and served as a member of the I.L.O. Mission to advise the Government of Ceylon on the Strategy for Full Employment, in March-April 1971. He has been entrusted with a study of Cooperative Processing in several Asian, African and European countries and to prepare a report on it, by the F.A.O. I also had the privilege to be invited to act as a consultant and lecturer at the FAO Inter-regional Seminar on Agrarian Structure and Cooperatives held in Poland and Denmark in 1966.

### **Membership of Academic Bodies and Committee**

Dr. V. S. Vyas has served on various committees of academic bodies and the Gujarat Government and the Central Government. Among these may be mentioned the Fertilizers Policy Committee, the Backward Area Study Group, Committee for Evaluation of Panchayati Raj. The Gujarat State Agricultural Development Council, Panel of Economist appointed by the Planning Commission, Member of Board of Directors of the National Cooperative Development Corporation, Bank of Maharashtra, the Gujarat State Cooperative Bank and the Gujarat State Cooperative Land Development Bank, Member of the Planning, Team of the International Research Centre for Rural Communities, Tel Aviv, etc. He is also one of the Vice-Presidents of the Indian Society of Agricultural Economics, Bombay and a member of the Executive Committee of the Gujarat Economic Association.

In retrospect, it can be said that the first decade of the Centre has been a period of exciting and fruitful activities. Because of the good work done in the short span of time, the Centre has come to be recognized as one of the leading institutes engaged in agricultural economic research. Many individuals and agencies have helped us in putting the Centre on a sound footing. A particular mention must be made of the Vice Chancellors of the Sardar Patel University who took keen and personal interest in developing the Centre by providing all the necessary facilities and in giving solid support to the Centre in its activities. A lot has been done for the Centre also by Shri H. M. Patel who was instrumental in having the Centre located at Vallabh Vidyanagar. He has been closely associated with the Centre ever since its inception both as a member of the Governing Body and as one deeply interested in the problems of rural development. The Vice Chancellor and Shri H M Patel have been pillars of strength and unfailing source of inspiration for the members of the staff of the Centre. Other members of the Governing Body, particularly Prof. M L Dantwala, Prof. M V Mathur,

Prof. R K Amin and Prof D T Lakdawala have also made valuable contributions to the development of the Centre, by their useful suggestions and recommendations for drawing up research programmes and by giving the benefits of their experience and wisdom in deciding other policy matters of the Centre. The Directorate of Economic & Statistics, and particularly the Economic & Statistical Advisers, has been extremely helpful to the Centre. Besides, many more individuals and institutions have helped the Centre in various ways. To all of them our grateful thanks are due.

Before I conclude, I would like to mention the important development of which you are aware. I refer to the appointment of Dr. Vyas as a full-time member of the Agricultural Prices Commission. Dr. Vyas will be away from Vallabh Vidyanagar for about a year. His contribution to the development of the Centre has been invaluable. He has been at the helm of affairs of the Centre ever since its inception. Due to this ceaseless efforts, hard ward, enlightened and dynamic leadership, he has been able to place the Centre on a sound footing and has earned enviable reputation and prestige for the Centre. He has been an able guide to all of us in our work and has inspired and helped us in improving the quality of the studies. We are, therefore, sure to miss him very much. We hope he will come back to the Centre again after completing his assignment and will take the reins of the Centre in his hands to take it to a still higher pinnacle of prestige. On behalf of all my colleagues and on my own behalf I extend warmest congratulations to him. We are sure that with his deep inside into the problems of marketing faced by farmers, and his understanding of the structure and functioning of markets for agricultural products, Dr. Vyas will be able to make a substantial and useful contribution to the evaluation of a sound price policy for agricultural commodities. We wish him a glorious success in his new assignment. I will end by saying au revoir to him.

Thank you

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*Statement No. 1: Staff sanctioned for the Agro-Economic research centre proper (from 1961-62 to 1970-71)*

Year	Director	Dy. Director	RO / MTU Officer	SRA SA	RA/ TA	Investigator /H P O	Office Assistant	Steno-Grapher	Sr. Clerk/ Typist	Peon	Total
1961-62	-	1	1	3	4	3	-	1	1	1	15
1962-63	-	1	1	6	8	8	-	1	2	2	29
1963-64	-	1	1	6	8	8	-	1	2	2	29
1964-65	1	-	2	6	8	9	-	1	2	2	31
1965-66	1	-	3	6	8	9	-	1	2	2	32
1966-67	1	-	3	6	8	9	-	1	2	2	32
1967-68	1*	1	3	7	8	7	-	1	2	2	32
1968-69	1*	1	3	7	8	7	1	1	1	2	32
1969-70	1*	1	3	7	8	7	1	1	1	2	32
1970-71	1*	1	3	7	9	9	1	1	1	2	35

Notes: \* Hon. Director; R O = Research Officer; MTU Officer= Officer (Machine Tabulation Unit); SRA= Senior Research Assistant; SA= Statistical Assistant; RA= Research Assistant; TA= Tabulation Assistant; HPO= Hand Punch Operator.

*Statement No. 2: Staff sanctioned for the centre for the various scheme entrusted to the Centre during 1961-62 to 1970-71*

Year	SRO	RO	SRA SA	RA/ Field Supervisor	Investigator	Computer	Fieldsmen	Steno-Grapher	Sr. Clerk	Jr. Clerk	Peon	Total
1961-62	-	-	-	-	-	-	-	-	-	-	-	-
1962-63	-	-	-	-	-	-	-	-	-	-	-	-
1963-64	-	1	1	1	-	-	-	-	-	-	-	3
1964-65	-	1	-	-	-	-	-	-	-	-	-	1
1965-66	-	3	-	-	2	-	-	-	-	-	-	5
1966-67	-	-	-	-	-	-	-	-	-	-	-	-
1967-68	-	-	-	-	-	-	-	-	-	-	-	-
1968-69	-	-	-	1	1	2	-	-	-	1	-	5
1969-70	-	-	-	1	1	2	-	-	-	1	-	5
1970-71	1	3	-	10	1	6	44	1	2	2	2	73

Notes: SRO = Senior Research Officer; R O = Research Officer; SRA= Senior Research Assistant; SA= Statistical Assistant RA= Research Assistant.

Statement No. 3: Statement showing the actual expenditure incurred in different years from 1961-62 to 1970-71

(Rupees in lakhs)

Year	Agro-Economic Research Centre - Proper	Other Scheme/Project	Total
1961-62	0.40	-	0.40
1962-63	0.90	-	0.90
1963-64	1.04	0.07	1.11
1964-65	1.24	0.04	1.28
1965-66	1.46	0.23	1.69
1966-67	1.60	0.04	1.64
1967-68	2.15	-	2.19
1968-69	2.43	0.13	2.56
1969-70	2.19	0.27	2.46
1970-71	2.37	1.46	3.83

Statement No. 4: Statement giving information about the research schemes entrusted to the Centre by different agencies & financial assistance received in different years.

Sr. No	Year	Name of Research Scheme/ Project	Sponsoring Agency	Duration of the Scheme	Financial assistance received	Remark
1	2	3	4	5	6	7
1	1963-64	Studies of impact of development schemes on Agricultural Labour.	Director of Labour Bureau, Ministry of Labour and Employment, Government of India	7 Months	1500/-	Completed and published under title 'Agricultural Labour in Four Indian Village'.
2	1963-64	Socio Economic Survey of Villages coming under the command area of the Dantiwada Irrigation Project.	Public Works Department, Government of Gujarat.	7 Months	3500/-	Completed and circulated in mimeographed form under the title 'Command Area of the Dantiwada Irrigation Project'
3	1963-64	First Round of Evaluation of Pilot Cooperative Farming Societies in Gujarat and Rajasthan.	Ministry of Community Development & Cooperation, Government of India. (Department of Cooperation) New Delhi	1 Year	6000/-	Completed and submitted to Union Ministry of C.D in typed form
4	1965-66	Economic Impact of Cotton Cultivation in Sabarkantha District	Director of Agriculture, Government of Gujarat	1 Year	7500/-	Completed and circulated in mimeographed form under the title 'Economics of Cotton Cultivation'
5	1965-66	Social-Economic Survey of Borsad Taluka	Development Commissioner, Ahmedabad Division, Gujarat State	1 Year	10100/-	Completed and circulated in mimeographed form under the title " Economics Survey of Borsad Taluka"

1	2	3	4	5	6	7
6	1965-66	Second Round of Evaluation of Pilot Cooperative Farming Societies in Gujarat and Rajasthan	Ministry of Community Development & Cooperation, Government of India, (Department of Cooperation) New Delhi	1 Year	10000/-	Completed and circulated in mimeographed form under the title 'Assessment of Cooperative Farming Societies in Gujarat and Rajasthan'
7	1968-69	Economic Significance of New Technology for small Farmers	Planning Commission, New Delhi	8 Months	4750/-	Completed and published under title "Significance of the New Strategy of Agricultural Development for Small Farmers".
		Conditions of Stability and Growth in Arid Agriculture	Planning Commission, New Delhi	8 Months	4750/-	Completed and published under title 'Conditions of Stability and Growth in Arid Agriculture'
8	1968-69	Implementation of the Indicator's Scheme in Pali District, Rajasthan	Ministry of Food & Agriculture, (Dept. of Agriculture) Government of India, New Delhi	4 Years (Approx.)	92700/- (including Budget Estimates for 1971-72)	Monthly Indices of Impact Cost on the basis of data collected from selected villages are being sent every month to the Union Ministry of Food and Agriculture.
9	1970-71	Economic Relationship between Dairying and Crop Production in Developing Rural Areas (PL-480 Research Project)	U S Department of Agriculture, New Delhi Agricultural Research Service, New Delhi	3 Years	180000/-	Field-Work in Progress
10	1970-71	Comprehensive Scheme for studying the Cost of Cultivation of Principal Crops in Gujarat	Ministry of Food & Agriculture, (Dept. of Agriculture) Government of India, New Delhi	5 years (Approx.)	284000/- (including BE for 1971-72)	Field-Work in Progress
11	1970-71	Economic of Production and Marketing of Different Varieties of Bajra	Director of Agriculture, Government of Gujarat	1 year	27000/-	Report being drafted
12	1971-72	Appropriate Institutional Set up for Agricultural Development	Overseas Development Institute, London & University of Reading	19 months	65000/- (Approx.)	Project Commenced since 1-6-1971

*Statement No. 5: List of Research Studies of the Centre*

*Research Studies Completed*

1. A Study of Wheat Prices in the States of Gujarat and Rajasthan (1948-49 to 1960-61).
2. The Organization and Disintegration of a Collective Farming Society: A Case Study of a Gramdan Village.
3. Economics of Well Irrigation in a Rajasthan Village.
4. Agricultural Labour in Four Indian Villages.
5. Command Area of the Dantiwada Project (Socio-Economic survey of Three Banaskantha Villages in Gujarat).
6. Working of Fair Price Shops in Gujarat and Rajasthan (With Special reference to Ahmedabad and Jaipur Cities).
7. A study of Pilot Cooperative Farming Societies in Gujarat and Rajasthan (Typed)
8. Factor Affecting Marketable Surplus and Marketed Surplus (A Study in two regions of Gujarat and Rajasthan).
9. Factors Affecting Acceptance of Improved Agricultural Practices (A Study in a I.A.D.P. district in Rajasthan).
10. Economic of Cotton Cultivation (A Study in a selected region of Sabarkantha district of Gujarat).
11. Economic Survey of Borsad Taluka (Gujarat State) with Special Reference to the impact of Community Development Programme
12. An Evaluation of some Aspects of Hybrid Maize Programme in Dahod Taluka (Panchmahal district, Gujarat)
13. As Assessment of Cooperative Farming Societies in Gujarat and Rajasthan (A few case studies)
14. An Enquiry into the Implementation of Farm Plans in Bardoli Taluka (A Study in an IADP District in Gujarat).
15. New Strategy of Agricultural Development in Operation (A Case Study of the Kaira District in Gujarat).
16. Condition of Stability and Growth in Arid Agriculture.
17. Significance of the New Strategy of Agricultural Development for Small Farmers- A Cross-Sectional Study of Two Areas.
18. A study of the Hybrid Bajra Programme in the Kaira District Gujarat (Summer 1967-68).
19. A Study of the Hybrid Bajra Programme in the Ahmedabad District, Gujarat (Kharif 1968-69)
20. Some Aspects of Long Term Agricultural Finance - A Study of Two Areas in Gujarat.
21. A Study of High Yielding Varieties Programme in Kota District, Rajasthan (Rabi 1968-69)
22. Prospects and Problems of Dairy Development in a Desert Region (A Study in the Bikaner District of Rajasthan)
23. An Enquiry into the Working of Cooperative Credit Institutions in the Bhilwada District, Rajasthan.



**Research Studies in Progress:**

1. A Study of Income, Saving and Investment of Farmers in Prosperous Agricultural Areas (Surat District, Gujarat and Kota District, Rajasthan)
  2. A Study of Problems of Storage and Warehousing of Food grains in the Cambey Taluka of Gujarat
  3. Impact of Famine on the Farm Economy of Banaskantha District in Gujarat and Barmer District in Rajasthan.
  4. Problems of Marginal and Sub-Marginal Farmers and Agricultural Laborers in the Borsad Taluka in Gujarat.
  5. A Resurvey of Borsad Taluka in Gujarat
  6. Production and Marketing of Bajra in Three Districts of Gujarat
  7. A Study of Consumption and Employment in four villages of the Kaira District.
  8. Economic Relationship between Dairying and Crop Production in a Developing Rural Areas.
  9. Appropriate Institutional Set up for Agricultural Development.
  10. Study of Cost of Cultivation of Principal Crops in Gujarat.
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*Statement No. 6: List of Village Survey and Resurvey of the Centre**(I) Bench Mark Village Survey Completed*

- |   |               |  |
|---|---------------|--|
| 1 | PATADIA       | (Sabarkantha District, Gujarat)<br>A Tribal Village Economy in Transition.           |
| 2 | HASTEDA       | (Jaipur District, Rajasthan)<br>Economic Life in a Rajasthan Village                 |
| 3 | ANKODIA       | (Baroda District, Gujarat)<br>Economic Life in a Tobacco Village                     |
| 4 | NAURANGDESWAR | (Sriganganagar District, Rajasthan)<br>A Village in Rajasthan Canal Zone             |
| 5 | AIDAN-KA-WAS  | (Jaipur District, Rajasthan)<br>A Gramdan Village in Rajasthan                       |
| 6 | KOTHIAKHAD    | (Kaira District Gujarat)<br>Socio-Economic Study of a Ravine Affected Village        |
| 7 | AFAWA         | (Surat District , Gujarat)<br>An Advance Village in Traditional Setting              |
| 8 | JAMBUA        | (Panchmahal District, Gujarat)<br>A Tribal Village on the Threshold of Modernization |
| 9 | FALNA         | (Pali District, Rajasthan)<br>Socio-Economic Profile of a Village in IADP dist       |

- |    |             |   |
|----|-------------|---|
| 10 | MOTI KHADOL | (Kaira District Gujarat)<br>An Economic Survey of a Charotar village              |
| 11 | DHANFULIA   | (Junagadh District, Gujarat)<br>Economic Life in Saurashtra Village               |
| 12 | NARGOL      | (Bulsar District, Gujarat)<br>Profile of a Fishing Village                        |
| 13 | OON         | (Surat District , Gujarat)<br>A Village on the Pheripheri of an Industrial Estate |
| 14 | RAMPURA     | (Mehsana District , Gujarat)<br>Economic Survey of a North Gujarat                |
| 15 | SAHNUSAR    | (Sikar District, Rajasthan)<br>A Village Economy in Semi Arid Region              |
| 16 | HARSAWA     | (Sikar District, Rajasthan)<br>A Village Economy in Semi Arid Region              |

#### *II Village Resurvey*

- |   |         |   |
|---|---------|---|
| 1 | ANKODIA | (Baroda District, Gujarat) Change in<br>Economic Life of a Tobacco Village. |
|---|---------|---|

#### *III. Bench-Mark Village Surveys in Progress:*

- |   |            |                                |
|---|------------|--------------------------------|
| 1 | UMEDPUR    | (Jalore District, Rajasthan)   |
| 2 | MALPURA    | (Jalore District, Rajasthan)   |
| 3 | SHAMALDEVI | (Panchmahal District, Gujarat) |
| 4 | DINGRI     | (Udaipur District Rajasthan)   |
| 5 | ZAVARMATA  | (Udaipur District Rajasthan)   |

#### *IV. Village Resurveys in Progress:*

- |   |              |                                   |
|---|--------------|-----------------------------------|
| 1 | NAURANGDESAR | Sriganganagar District, Rajasthan |
|---|--------------|-----------------------------------|

Statement No. 7: Publications of the Centre:

1. Agricultural Labour in Four Indian Villages by V S Vyas; the Sardar Patel University, Vallabh Vidyanagar, 1964, pp.119, (Price Rs.5.00).  
The study highlights conditions of agricultural labour and factors determining wages and employment in villages of Gujarat and Rajasthan.
2. HASTEDA, (Jaipur District, Rajasthan) -Economic Life in a Rajasthan Village; By M D Desai; The Sardar Patel University, Vallabh Vidyanagar, 1966, pp. 224; (Price Rs. 7.50).  
The book depicts economic conditions of a village in Jaipur district, the past prosperity of which was eroded by natural calamities forcing an increase in the pressure on agriculture and emigration of the people to far-off regions in search of livelihood.
3. The New Strategy of Agricultural Development in Operation- (A Case Study of the Kaira District in Gujarat), by M M Desai and M D Desai; Thacker & Co. Ltd, Bombay, 1969, pp.148 (Price Rs.25).  
  
The Study attempts a critical assessment of the various aspects of the implementation of the High Yielding Varieties Programmes (with special reference to hybrid bajra) in one of the progressive district of Gujarat; it also analysis, from many angles, the performance of hybrid bajra at the farm level.
4. Significance of the New Strategy of Agricultural development for Small Farmers- (A cross Sectional study of two areas of Gujarat). By V S Vyas, D S Tyagi V N Misra, Agro-Economic Research Centre Vallabh Vidyanagar, 1969, Pp. 95, (Price Rs. 10).  
The study examines the economic factors affecting the adoption of the new technology by small farmers and the extent to which such adoption can make economy of small farmers viable.
5. Conditions of stability and growth in Arid Agriculture; by N S Jodha and V S Vyas Agro-Economic Research Centre Vallabh Vidyanagar, 1970, pp.127, (Price Rs. 15).  
The study analyses the basis problems of arid agriculture and presents on integrated approach to ensure stability and growth of farm economy in the desert region of Rajasthan, the wide range of measures discussed pertain to harnessing of ground water, proper integration of crop and livestock farming and adoption of conservation technology both for crop lands and grass land for higher production from arid lands.

Statement No. 8: Detail of Members of the staff of the Centre deputed for the Training Course

Year	Name and Designation	Subject of Training Course	Organised by
1962	K R Rakhral Statistical Assistant	Computer Training Programme	Indian Institute of Technology, Kanpur
1964	M H Maharaja & V S Dharap Statistical Assistant	Summer School in Statistic	M S University of Baroda
1965	K R Pichholiya Research Assistant	Summer Training Course in Rural Development	Kashi Vidyapeeth
1965	M H Maharaja Statistical Assistant	Intensive Training Course in Farm Management	Indian Society of Agricultural Economics, Bombay, held at Bangalore
1965	V S Dharap Statistical Assistant D P Mathur Investigator	Short Term Training Course for Western India	Indian Society of Agricultural Economics, Bombay, Held at Nagpur
1966	V S Dharap Statistical Assistant	Intensive Course-cum-workshop in Farm Management	Indian Society of Agricultural Economics, Bombay, Held at Bombay
1968	R M Patel Research Officer	Course on Research Methodology	Indian Society of Agricultural Economics, Bombay, held at Poona
1968	M L Bhat Sr. Research Assistant	Refresher Course on Research Methodology	Indian Society of Agricultural Economics, Bombay, held at Pantnagar
1968	K K Mohan M T U officer	Training course Covering 80 Col. Data Processing Equipment	International Computer Ltd., Bombay
1968	M D Desai Dy. Director	University Teachers Programme on Economic Analysis for Business Decisions.	Indian Institute of Management Ahmedabad, held at Agra.
1969	N R Shah Sr. Research Assistant	Summer Institute on Production Economics and Farm Management	Indian Society of Agricultural Economics, Bombay, held at Pantnagar
1969	N S Jodha Sr. Research Officer	Refresher Course on Research Methodology	Indian Society of Agricultural Economics, Bombay, held at Bangalore
1971	M T Bapat Sr. Research Assistant	Refresher Course on Financing of Agriculture	Indian Society of Agricultural Economics, Bombay, held at Hyderabad

Statement No. 9: The following All-India Seminar/Conference/Courses were organized at Vallabh Vidyanagar by or with the help of the Agro-Economic Research Centre

Seminar/Conference/Courses were organized	Month	Year
Twenty Fourth All-India Agricultural Economics Conference	December	1964
Short Term Farm Management Training Course for Western India		1964
Seminar on Fixation of Support Prices for Food grains	October	1965
Seminar on Role of Commercial Banks and Cooperative in Financing Agricultural Production	January	1968
Seminar on Taxation of Agricultural Land and Income	March	1969
Seminar on Farm Mechanization	July	1970
Training Course in Survey Research Methods	October	1969

Statement No. 10: Statement showing the Conference in which the members of the staff of the Centre participated

Sr. No	Name of the Conference	Where held	When held
1	The 21st All India Agricultural Conference	Pilani	21 <sup>st</sup> to 23 <sup>rd</sup> December, 1961
2	The Agro Economic Research Conference	Delhi	23rd October 1961
3	Fourth Conference of the Research Workers of Gujarat	Ahmedabad	19-10-60 to 21-10-60
4	The 22nd Conference of All India Agricultural Conference	Ahmedabad	26-12-62 to 29-12-62
5	23rd All India Agricultural Economic Conference	Bombay	December 1963
6	Conference on Utilization of Rural Manpower"	New Delhi	1966
7	World Land Reforms	Rome	1966
8	25th All India Agricultural Economic Conference	Allahabad	26th to 28th December 1966
9	All India Agricultural Economic Conference	Ludhiana	January, 1967
10	First Rajasthan Economic Conference	Jodhpur	October, 1967
11	27th All India Agricultural Conference	Jabalpur	21st to 23rd Dec, 1967
12	50th All India Economic Conference	Madras	27 <sup>th</sup> to 31 <sup>st</sup> December 1967
13	28th All India Agricultural Economic Conference	Coimbatore	23rd to 25th Dec, 1968
14	Development of Agro Industrial in Gujarat at the Gujarat Industrial Conference	Ahmedabad	31 <sup>st</sup> December, 1968 to 1 <sup>st</sup> January, 1969

15	29th Annual Conference of the Indian Society of Agricultural Economics	Waltair	29th Dec to 31st Dec, 1969
16	23rd Annual Session of the Indian Society of Agricultural Statistics	Bombay	22 <sup>nd</sup> to 24 <sup>th</sup> December, 1969
17	Gujarat Economic Association Conference	Ahmedabad	11 <sup>th</sup> & 12 <sup>th</sup> April, 1970
18	Cambridge Conference on Development	Cambridge (UK)	13-09-1970 to 24-09-1970
19	30th Annual Conference of the Indian Society of Agricultural Economics	Pantnagar	23 <sup>rd</sup> to 25 <sup>th</sup> Oct, 1970
20	International Conference of Agricultural Economists	Minsk (USSR)	24 <sup>th</sup> August to 2 <sup>nd</sup> September, 1970
21	Second Gujarat Economic Conference	Baroda	January, 1971

Statement No. 11: Statement showing the Seminar in which the members of the staff of the Centre participated

Sr. No.	Subject of the Seminar	Where held	When held
1	"Village Resurvey"	Delhi	24 <sup>th</sup> and 25 <sup>th</sup> October, 1961
2	Human Factor in the Growth of Rural Economy	Shantiniketan	1962
3	Agricultural Marketing	Matheran	November, 1963
4	Dairy Management	Ahmedabad	December, 1963
5	Rural Reconstruction	V V Nagar	1964
6	Community Development and Change in India	Mount Abu	October, 1964
7	Panchayati Raj Planning and Democracy	Rajasthan	December, 1964
8	Economic Development and Social Justice	Delhi	February, 1965
9	Agricultural Development-Problems and Perspectives	Mahabaleswar	12 <sup>th</sup> to 15 <sup>th</sup> November, 1965
10	Fixation of Support Prices for Foodgrains	V V Nagar	1965
11	Co-operative Farming	Khadasali	Jan, 1965
12	Agro Economic Research	Poona	Feb, 1965
13	Approaches to Economic Development in Emerging Nations	Bombay	1965
14	Co-operation and Planning	Jaipur	1965

15	Land Reform	New Delhi	1965
16	The University and the New Frontier of Knowledge	V V Nagar	1965
17	Co-operative Farming	Delhi	May 1 <sup>st</sup> to May 14 <sup>th</sup> 1966
18	" Training Rural Workers as change agents"	Baroda	-
19	Agrarian Structure & Co-operatives	Poland & Denmark	22 <sup>nd</sup> September, to 16 <sup>th</sup> October, 1966
20	Co-operative Processing	Bangalore	5 <sup>th</sup> to 20 <sup>th</sup> December, 1966
21	Problems of Small Farmers	Bombay	March, 1967
22	Interdisciplinary Seminar on Co-operation	Poona	26 <sup>th</sup> to 28 <sup>th</sup> March 1968
23	Co-operative Financing for Agricultural development	Jodhpur	-
24	Economic Decentralization	Bombay	19 <sup>th</sup> to 21 <sup>st</sup> July, 1968
25	Buffer Stock	Bangalore	1 <sup>st</sup> to 3 <sup>rd</sup> Nov, 1968
26	Taxation of Agricultural Land and Income	V. V. Nagar	March, 1969
27	Marketing of Fruits and Vegetables	Bombay	22 <sup>nd</sup> to 24 <sup>th</sup> May , 1969
28	Village Surveys and Resurveys Poona	Poona	13 <sup>th</sup> & 14 <sup>th</sup> September, 1969
29	Economic Development in South Asia	Stockholm	-
30	Problem and Prospects of Educated Youth in Gujarat	V. V. Nagar	2 <sup>nd</sup> and 3 <sup>rd</sup> March, 1970
31	Socio-Economic Research on Tribal Areas	Jorhat	11 <sup>th</sup> to 13 <sup>th</sup> February, 1970
32	Employment and Income Distribution	New Delhi	29 <sup>th</sup> & 30 <sup>th</sup> March, 1970
33	Farm Mechanization	V. V. Nagar	24 <sup>th</sup> to 26 <sup>th</sup> July 1970
34	Methodologies of Studying the Productivity in Agriculture	New Delhi	19 <sup>th</sup> to 21 <sup>st</sup> August, 1970
35	Agricultural Development	Jaipur	2 <sup>nd</sup> to 5 <sup>th</sup> December, 1970

Statement No. 12: List of Research Article published by members of the staff during 1961-70

V. S. Vyas			
Sr. No.	Title of the Article	Journal	Issue
1	An Analysis of Food Prices in India. (Jointly with Mr. A K Parikh)	Indian Journal of Agricultural Economics	July-Sept. 1961
2	Economic Consequences of Land Reform	AICC Economic Review	Sept. 22, 1961
3	Agriculture during Last Decade	United Asia	1961
4	Land Reform in India- Review of a Decade	A Decade of Economic Development & Planning in India-by M R Sinha, Bombay	1962
5	Investment in Agriculture- (with Prof. D T Lakdawala & others)	Souvenir volume on the Occasion of International Agricultural Economic Conference (ed) J P Bhattacharjee, Bombay	1962
6	Panchayati Raj in Gujarat	Economic Weekly	13th April, 1963
7	India's Rate of Economic Growth- Need for a Reappraisal (Translated in German)	WIRTSCHFT DIONST Hamburg.	September, 1963
8	Uncertainty & Crop Planning (with K R Rakhral)	Indian Journal of Agricultural Economics	January-March, 1964
9	Some Administrative Aspects of Panchayati Raj.	H M Patel's 60th Birthday commemoration Volume, V V Nagar	1964
10	Decentralized Planning : Its nature, Scope and limitations.	Artha-Vikas	1965
11	Use of Rural Manpower for Development	Economic Weekly	19th June, 1965
12	Community Development & Building up Production Potential in Rural India	Community Development and change in India, Baroda	1965
13	Factor Affecting Marketable Surplus & Marketed Supplies (A Case Study in two regions of Gujarat and Rajasthan), (with M H Maharaja)	Artha-Vikas	June, 1966
14	Operations & Management of Co-operative farms	Indian Co-operative Review	August, 1966
15	Alternatives before Small Farmers	Khadi Gramodyog	January, 1966
16	Land Reform Legislation & Agrarian structure	Seminar	May, 1968



17	Factors Influencing the level of literacy in Rural Areas	Artha-Vikas	January, 1967
18	Food Policy- Plea for Realism	Economic Times	March 28, 1967
19	Problems of Agricultural Development in Rajasthan (Jointly with M L Bhat)	PIGMY Economic Review	August, 1967
20	Rapporteur's Report on Food policy in India	In the volume papers read at the 15th Annual Conference of Indian Economic Association, Madras	December, 1967
21	Financing Agricultural Production during the 4th Five year plan	Artha-Vikas	January, 1968
22	Rapporteur's Report on Institutional finance for Agricultural Development	Indian Journal of Agricultural Economics	October-December 1968
23	The New Strategy - Lessons of First three years	Economic & Political Weekly Review of Agriculture	October 26 <sup>th</sup> , 1968
24	Economic Efficiency on small of central Gujarat	Report of the seminar on problem of the small farmer, Bombay	1968
25	Some Aspects of Irrigation Development	Foundation of Indian Agriculture Bombay	1968
26	Integration of Farm and Non-Farm Employment	Artha-Vikas	1969
27	The New Agricultural Strategy and Small Farmers -A Case Study in Gujarat (with D S Tyagi and V N Misra).	Economic & Political Weekly Review of Agriculture	March/ August 1969
28	A Case for Taxation of Agricultural Income (with M T Pathak)	Artha-Vikas	July' 1969
29	Green Revolution- Promise & Problems.	Industrial India - Annual Number	1969
30	Economic Objectives and Policy Guide Lines	Economic Times	9th October 1969
31	Rural Labour Utilization and Agricultural Development	Artha-Vikas	Jan-70
32	Tenancy in a Dynamic Setting	Economic & Political Weekly -Review of Agriculture	Vol.V, No. 26 June 1970
33	An Estimation of Demand for cereals & Pulses in the coming decades (With A S Patel)	Artha-Vikas	Jul-70
34	Strategy for Development of Dry Areas.	Commerce	Vol.121. No. 3110 12-12-1970
35	Land Re-Distribution- the misplaced Emphasis	Seminar	April 1971.

<b>M. C. Shetty</b>			
1	"Factors Retarding Agricultural Production in India" (Jointly with Shri M D Desai)	Economic Times	06-09-1963
2	"Small Power Plants will solve Rural Electrification Problems"	Economic Times	23-12-1961
3	Shadow and Problems Areas in Agro Economic Research	Economic Times Bombay	17-11-1961
4	"Power shortage hampers" Industrial and Agricultural Development	Economic Times	16-12-1961
5	" Rural Electrification slow and lop-sided"	Economic Times	22-12-1961
<b>M D Desai</b>			
1	Agricultural Economic Conference	Economic Weekly	January 6, 1962
2	Factors Retarding Agricultural Production in India (Jointly with M C Shetty)	Economic Times	6.9.1963
3	The Role of the State in the Development of Co-operatives	Artha-Vikas	Vol.III, No.1 Jan. 1967
4	A note on the Experience of Hybrid Bajra cultivation in the Kaira District of Gujarat	Artha-Vikas	January, 1969
5	Green Revolution and Farm Labour use (Jointly with K K Mohan)	Artha-Vikas	July, 1970
6	Green Revolution in Gujarat Achievements and Short comings	Industrial March	April, 1970
7	Agricultural Development in Gujarat	Souvenir volume Published on the Occasion of the 39th Annual Research Session of the Central board of the Irrigation and Power (India).	July, 1969
<b>K M Chaudhary</b>			
1	The God and Goddesses of Bhilal Abroiginals	Vanya Jati Vol. II	April, 1963
2	Death rites among Bhilala Aborigines (in Hindi)	Vanya Jati	July, 1963
3	A Marriage Among Bhilala Aborigines	Vanya Jati Vol. 12 No.1	January, 1964
4	Ujban Ceremony among Bhilala Aborigines	Vanya Jati Vol. 12 No.4	October, 1964
5	Multipurpose Doctor "Badwa" of Bhilala Aborigines	Vanya Jati Vol. 12 No.2	April, 1964

6	The Unique Maternity Home of Bhilala Aborigines	Vanya Jati Vol. 13 No.4	October, 1965
7	A Study of Improved Agricultural Practices in I.A.D.P. Pali.	Rajasthan Vikas	February, 1966
8	Organization and Disintegration of a collective Farming Society in a Gramdan Village	Artha-Vikas Vol. II No.2	July, 1966
9	"Acceptance of Improved Practices and their diffusion among wheat growers in Pali district of Rajasthan' (Jointly with M. H. Maharaja)	Indian Journal of Agricultural Economics	January-March 1968
10	A note on Effectiveness of rural workers as change agents	In the Volume of proceeding of the seminar on Training Rural workers as change agents"	March, 1967
11	A brief note on studies in Economics of Dairying	In the Volume of Proceeding of the First all India Agricultural Marketing Research Conference held at Pantnagar	14 to 16 February, 1969
<b>N S Jodha</b>			
1	Farm Forestry for Desert Development -Some Economic Aspect.	Indian Journal of Agricultural Economics	October-Dec 1967
2	Institutional Finance: Problem & Prospects in Arid Agriculture (Jointly with M L Bhatt)	Indian Journal of Agricultural Economics Vol. XXIII No.4	October-Dec 1968
3	Cost-Benefit analysis of Pasture improvement in the arid region of Rajasthan	Annals of Arid Zone Vol 7 No.2	September, 1968
4	Drought & Scarcity in Rajasthan desert: Some Basic Issue	Economic & Political Weekly	April, 1969
5	"Maru Kshetron me Krishi Vikas ki Shambhavana" (Hindi)	Rajasthan Vikas	May, 1969
6	Land Policies of Rajasthan- Some neglected aspects	Economic & Political Weekly Review of Agriculture Vol.V No.26	1970
7	Is Green Revolution Stable? (Jointly with V.S Dharap)	Artha-Vikas	July, 1970
8	" Conservation Technology & Capital Formation in Arid Agriculture"	Annals of Arid Zone Vol 9 No.4	December, 1970
9	Nature and extent of diversion of Long Term Agricultural Finance loan in Gujarat	Artha-Vikas Vol.No.7 No.1	January, 1971

<b>D S TYAGI</b>			
1	New Agricultural Strategy & Small Farmers- a case study in Gujarat. (Jointly with Dr V S Vyas & V N Mishra	Economic & Political Weekly Review of Agriculture Vol. IV No.13	March 20,1969
2	A Survey of Methodologies and Conclusions Emerging from Recent Studies on Farmers' response to prices	Artha-Vikas	July,1970
<b>M L BHAT</b>			
1	Land Reform in Jammu & Kashmir State-a Review	AICC Economic Review	1.7.1963
2	Agricultural Co-operative Credit Movement in Jammu & Kashmir	Khadi Gramodyog	July, 1963
3	livestock Jammu & Kashmir- Some Problems	Khadi Gramodyog	September, 1964
4	Development of Sericulture in Jammu & Kashmir	Khadi Gramodyog	July, 1964
5	Agro Industries in India- Problem & Prospect	Khadi Gramodyog	May,1966
6	"Community Development in India at Cross Road	AICC Economic Review	December, 1966
7	Problems of Agricultural Development in Rajasthan (Jointly with Dr. V S Vyas)	PIGMY Economic Review Vol.13 No.2	1967
8	Institutional Finance: Problems & Prospects in Arid Agriculture (Jointly With Dr. N S Jodha)	Indian Journal of Agricultural Economics Vol.XXIII No.4	Oct-Dec 1968
<b>V S Dharap</b>			
1	Production Function for a Sample of Farms in AFAWA village	Artha-Vikas	January, 1965
2	Economics of Milk Production in a Kaira District Village	Artha-Vikas Vol.III No.2	July,1967
3	Is Green Revolution Stable? (Jointly with N S Jodha)	Artha-Vikas	July, 1970

## WORK DONE DURING THE YEAR 1971-72

During the financial year ending 31<sup>st</sup> March, 1972, the centre undertook field work of five research studies initiated last year; released report on one village survey and one research study. Details of work done during the year are given below:-

### Field work:

The centre undertook and completed the field work in respect of the following studies:-

- 1) A study of income, saving and investment of a gross section of farmers in Surat district, Gujarat. (Second round, second year and first round, third year).
- 2) A study of income, saving and investment of a cross section of farmers in Kota district, Rajasthan. (Second round, first year and first round, second year).
- 3) Economic Relationship between Crop Production and Dairying in South Gujarat. (Third round, First year and First and second rounds, second year).
- 4) A study of Employment and Consumption in four central Gujarat villages.
- 5) A study of impact of famine on farm economy in the Banaskantha District of Gujarat and Barmer District of Rajasthan.
- 6) Collection of secondary data for the study of "Short term Cooperative credit in Gujarat and Maharashtra" (ODI-Research Project)

### Tabulation of Data:

The Mechanical Tabulation Unit of the centre processed and tabulated data for the following studies during the year:-

- 1) Completed Tabulation of the first year data in respect of the study of income, saving and investment of a cross section of farmers in Surat District.
- 2) Processing of the data collected for the year (1970-71) of the study on income, saving and investment of a cross section of farmers in the Kota District, Rajasthan.
- 3) Punching of data collected during first year of field work for the PL-480 Research project on "Economic Relationship between crop production and Dairying in South Gujarat."
- 4) Punched substantial portion of the data collected for a Resurvey of Borsad Taluka in Gujarat.

- 5) Completed tabulation of data for the Research Project on “Production and Marketing of Bajra in three districts of Gujarat” (Government of Gujarat Research Project).
- 6) Processed data collected for the study of “Consumption and employment in four central Gujarat villages”.
- 7) Processing of data on impact of famine on the farm economy in Banaskantha and Barmer Districts.

The M.T. Unit helped in tabulation of data collected by three research students of the Sardar Patel University.

### **Drafting of Report:**

#### ***Research Studies:***

The centre stenciled and cyclostyled the preliminary draft of the report on “Economics of Dairy Farming in Mehsana District” which was prepared by the centre for studies in Economics of Dairying.

The centre stenciled and cyclostyled the preliminary draft of the report on the study of working of cooperative credit institutions in Bhilwara District in Rajasthan.

The revision of the draft of the note on Marginal farmers and Agricultural Labourers in Borsad Taluka was nearly completed, at the end of the years.

First draft of the study of production and marketing of Bajra in three districts of Gujarat was fully revised and the revised draft was submitted for comments to Directorate of Agriculture, Gujarat.

In respect of the study of income, saving and investment by farmers in agriculturally prosperous areas (Surat district, Gujarat), three chapters on the basis of first years data were drafted. Also, a note on the limitations of the data was prepared and another note giving quick interpretation of the data on saving, investment and consumption pattern was prepared in draft form for submitting them to the Directorate of economics and statistics.

First draft of the report on the study of “Storage and warehousing of foodgrains in Cambay Taluka in Gujarat” was under revision at the end of the year.

The analytical framework and chapter scheme in respect of the study on “Economic Relationship between crop production and Dairying in Developing Rural Areas” (PL-480 Research Project) were

finalized and a beginning in drafting the report was also made during the year.

On the basis of the secondary data collected for the study of "Short term cooperative credit in Gujarat and Maharashtra", (ODI-Research project), a working paper entitled "cooperative credit movement in Gujarat and Maharashtra - A Note on regional differences in the performance of primary credit societies" was prepared; the paper was discussed at the meeting of the institutions collaborating in the project held at Hyderabad in January, 1972.

### **Village Surveys and Resurveys:**

During the year, the centre mimeographed and circulated the first point survey report on Umedpur village in the Jalore district of Rajasthan.

The following village survey/resurvey reports were undergoing revision at the end of the year under review:-

- a) Dingri village, Udaipur district, Rajasthan.
- b) Malpura village, Jalore district, Rajasthan.
- c) Shamaldevi village, Panchmahals district, Gujarat.

The following village survey/resurvey reports were being drafted at the end of the year:-

- a) Zavarmata village, Udaipur district, Rajasthan.
- b) A resurvey of Naurangdesar village, Sriganganagar district, Rajasthan.
- c) A Resurvey of Borsad Taluka in Gujarat.

### **Publication of the centre:**

During the year, the centre published the study entitled "Some Aspects of long term/agricultural finance -A study of Two Areas of Gujarat.

### **Other Activities:**

Dr. V.S. Vyas, Hon. Director of the centre was appointed as a Member of the Agricultural Prices Commission, Government of India. He took charge of the new assignment in July, 1971.

Dr. Dharm Narain, Chairman of the Agricultural Prices Commission, New Delhi visited the centre and had discussions with the Hon. Director on various aspects.

Shri Ram Sharan, Economics & Statistical Advisor, Ministry of Agriculture, Govt. of India, visited the centre in February 1972. He acquainted himself closely with the work of the centre and other research schemes entrusted to it.

Shri M. D. Desai, Dy. Director and (Ag.) officer-in-charge was invited by the Ahmedabad Management Association to serve as a member of the panel of experts for preparing a critical report on the 10 years Perspective plan of Agricultural Development of Gujarat State. He prepared a draft working paper entitled "Perspective Plan for Agricultural Development of Gujarat 1974-84: Some observations on Approach and Alternatives", for discussion among the panel members.

During the year, Miss Kirsten Toft Anderson and her two colleagues from Denmark; Mr. Robert Evenson and his two colleagues from the Yale University, U.S.A. visited the centre and had detailed discussions with the Deputy Director & (Ag.) Officer-in-charge of the centre on various activities of the centre.

Shri B.N. Kapre, Officer on Special Duty in the Directorate of Economics and Statistics, New Delhi visited the centre to acquaint himself with the progress of work in connection with Comprehensive Scheme to Study Cost of Cultivation of Principal Crops in Gujarat.

Shri M.T. Bapat, Sr. Research Assistant of the centre was deputed by the centre to participate in a Refresher course on "Financing of Agriculture" which the Indian Society of Agricultural Economics, Bombay, held at the National Institute of Community Development, Rajendranagar, for five weeks in May/June, 1971.

Dr. N.S. Jodha, Sr. Research Officer of the centre attended the seminar on "Quantitative Economics" on the 16<sup>th</sup> September, 1971, organised by the Sardar Patel Institute of Economics & Social Research, Ahmedabad.

Dr. N.S. Jodha and Shri S. D. Purohit of the centre attended the All-India Agricultural Economics Conference, held at Banaras Hindu University, Varanasi in March/April, 1972.

The centre assisted the Department of Economics of Sardar Patel University in organizing the Third Gujarat Economic Conference at Vallabh Vidyanagar in October, 1971. Shri S. P. Seetha Raman, Research Officer prepared papers entitled "Earmarking of cooperative credit for medium farmers" and "Case for Stream Lining Cooperative credit policy- Implications of Analysis on the Link between cooperative and agricultural efficiency" for the conference.

### **Research Papers:**

The following articles and papers were prepared by the members of the staff of the centre during the year:-



Sr. No.	Title	Journal in which Published
1.	"Conservation Technology and capital formation in Arid Agriculture" by Dr. N.S. Jodha	Annals of Arid Zone, Vol. 9 (4), Dec. 1970
2.	"Agriculture Development in the Tribal Districts of Udaipur Division of Rajasthan" by S. D. Purohit	Tribe Vol.VII, No.3, Dec., 1970.
3.	"Nature and Extent of Diversion of Long Term Agricultural Loans in Gujarat" by Dr. N.S. Jodha	Artha Vikas, Vol.7, No.1, January, 1971
4.	"Technocrats as head of the Block Team- A comment" by Dr. N.S. Jodha	Economic & Political Weekly, Vol.VI (26), June 26, 1971
5.	"Land Based Credit Policies and Investment Prospects for Small Farmers" by Dr. N.S. Jodha	Economic & Political Weekly, Vol.VI (39), September 25, 1971
6.	"Prospects of Demand for short term institutional credit for HYVs" by M.D.Desai and B.D.Naik	I.J.A.E., Vol. XXVI, No.4, Oct.-Dec., 1971
7.	"Weather and crop instability in the dry region of Rajasthan" by N.S. Jodha and S.D.Purohit	I.J.A.E., Vol. XXVI, No.4, Oct.-Dec., 1971
8.	"Bovine Population in Gujarat" by M.T.Bapat	Khadi Gramodyog, Feb. Vol.XVIII, No.5, Feb. ,1972
9.	Economics of Dairy Farming in Mehsana District, by Dr.V.S. Vyas & K.M.Choudhary	Artha- Vikas, July, 1971

## Work done

Items	Name of the village
1. Village Surveys:	
i) Ready in final form	Umedpur
ii) Ready in manuscript form	Dingri
iii) In progress	(1) Zawarmata
	(2) Malpura
	(3)Shamaldevi
2. Village Resurveys:	
i) Ready in final form	-
ii) Ready in manuscript form	Naurangdesar
iii) In progress	Borsad
3. Summaries of first Round Surveys:	-NIL-
4. Ad-hoc Studies:	
i) Ready in final form	An enquiry into the working of cooperative credit institutions in the Bhilwara District of Rajasthan.
ii) Ready in manuscript form	(1) A Note on the Marginal and sub-marginal farmers and landless agricultural labourers in Borsad Taluka, Gujarat.
	(2) A study of storage and warehousing of food-grains in Cambay taluka, Gujarat.
	(3) A study of Production and Marketing of Different varieties of Bajra in Three Districts of Gujarat.
iii) In progress	(1) A study of Income, Saving and Investment of a cross section of farmers in Surat District.

	(2) A study of Income, Saving and investment of farmers in Gujarat.
	A study of Income, Saving and investment of a cross section of farmers in Kota District.
	A study of Income, Saving and investment of farmers in Rajasthan.
	(3) Impact of Famine of the farm Economy in Banaskantha and Barmer Districts.
	(4) Consumption and Employment in Four Central Gujarat Villages.
	(5) Economic Relationship between Crop Production and Dairying in South Gujarat (PL-480, Research Project)
	(6) Study of Short Term Cooperative Credit in Gujarat and Maharashtra (ODI-Research Project)

### Backlog of Writing Work:

1. Village Summary	1) Zavarmata (Udaipur District, Rajasthan)
	2) Malpura (Jalore District, Rajasthan)
	3) Shamaldevi (Panchmahals District, Gujarat)
2. Village Resurvey	1) A Resurvey of Naurangdesar Village (Sriganganagar District, Rajasthan)
	2) A Resurvey of Borsad Taluka in Gujarat
3. Summaries of first point village survey	--
4. Ad-hoc Studies	1) Storage and Warehousing of Agricultural Produce (with Special reference to food-grains) in the Cambay Taluka in Gujarat
	2) A study of Income, Saving and Investment of a cross section of farmers in Surat District.
	3) A study of Income, Saving and investment of a cross section of farmers in Kota District.
	4) Economic Relationship between Crop Production and Dairying in Rural Areas (PL-480, Research Project)
	5) Impact of Famine of the farm Economy in Banaskantha (Gujarat) and Barmer (Rajasthan) Districts.
	6) Study of Short Term Cooperative Credit in Gujarat and Maharashtra (ODI-Research Project)

## **COMPREHENSIVE SCHEME TO STUDY THE COST OF CULTIVATION OF PRINCIPAL CROPS IN GUJARAT**

### **I. Field Work:**

The data collection work regarding kharif crops (1971-72) was completed. Regarding Rabi crops, with the completion of harvesting operations in Saurashtra and North Gujarat of Wheat, Jeera and rai, the data collection work of these areas is over and it is continuing in the case of central Gujarat. Sowing of summer bajra is over and in certain areas first weeding operations have also been completed. We are in the process of finalizing the operational holding for summer 1971-72.

In this quarter, we carried out 100 percent verification of all the schedules of one fortnight with the supervisors posted at the head office. This proved very useful because we could locate common mistakes done by fieldsmen and get them corrected. Towards the end of the quarter when the budget position for the scheme became clear, we arranged tours of supervisors to all clusters in their respective zones. This tour proved very useful because they could clear the doubts and correct the mistakes of the fieldsmen.

### **II. Census Work:**

Selection of 29 new clusters for the year 1972-73 was completed and the census work of eight clusters was also completed in this quarter. For carrying out the census work, the staff of the AER Centre had to be drawn upon.

### **III. Compilation Work:**

Compilation work could not be initiated in this quarter, since the final format of the compilation proforma were not received from the Ministry.

### **IV. Any Other:**

In this quarter, Shri Ram Sharan, Economic & Statistical Adviser, Ministry of Food & Agri., New Delhi visited the Centre. He also visited Petlad cluster and observed the process of data collection for the scheme. He also held discussions with the headquarters staff of the scheme in order to know the procedures for compilation of data and the problems related to it. At his suggestion, the Research Officer and Statistical Assistant

accompanied Shri M.D. Desai, officer-in-charge of the scheme to the Technical Workshop on the scheme held at Delhi, and explained the organizational set-up and procedures followed for collecting and semi-timising of data in our centre to the other implementing agencies. It was decided at the workshop that the next meeting of the officers-in-charge of the implementing agencies should be held at Vallabh Vidyanagar in order to observe the working of the Scheme at our Centre from close quarters and for exchange of experiences on collection, scrutiny and compilation of data.

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## **WORK DONE DURING THE YEAR 1972-73**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending **31<sup>st</sup> March, 1973**, is as under:-

### **I. Project Work Completed**

1. Economic Profile of Marginal Farmers and Labourers (*A Study in the Borsad Taluka of Gujarat*) by R.M. Patel, May, 1972.
2. Green Revolution and Problems of Marketing (A Study of Production and Marketing of Bajra in three Districts of Gujarat), by S. L. Bapna, July, 1972.
3. Some Aspects of Co-operative Short Term Agricultural Finance (A Study in Three Areas in Gujarat), by N.S. Jodha, March, 1973.

### **II. Problem-Oriented Studies in Progress:**

1. Integrated Dryland Agricultural Development Programme: A Case Study of the Rajkot Taluka in Gujarat (Rabi 1971-72).
2. Economic and Social Implications of Green Revolution (A Case Study of the Kota District).
3. Drought Prone Area Programme : A Case Study of the Banaskantha District in Gujarat (Rabi 1971-72).
4. Saving and Investment in an Agriculturally Prosperous Area (A Study of Farmers in Surat District), 1969-70, by M.D. Desai, 1973. (Supplement) Employment, Income and Levels of Living of Agricultural Labourers (A Study in the Surat District, Gujarat).

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. The work of compilation of data for the year 1970-71 was completed during the year and work of compilation of data for the year 1971-72 is in progress. Simultaneously, the preliminary compilation of the data collected during 1972-73 was also taken up and substantial progress was achieved in this regard.

## WORK DONE DURING THE YEAR 1973-74

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 1974, is as under:-

### I. Project Work Completed

1. Integrated Dryland Agricultural Development Programme: A Case Study of the Rajkot Taluka in Gujarat (Rabi 1971-72), by H.F. Patel, April, 1973.
2. Economic and Social Implications of Green Revolution (A Case Study of the Kota District), by S.L. Bapna, May, 1973.
3. Drought Prone Area Programme : A Case Study of the Banaskantha District in Gujarat (Rabi 1971-72), by R.D. Sevak, May, 1973.
4. Saving and Investment in an Agriculturally Prosperous Area (A Study of Farmers in Surat District), 1969-70, by M.D. Desai, 1973. (Supplement) Employment, Income and Levels of Living of Agricultural Labourers (A Study in the Surat District, Gujarat), 1969-70, by M.D. Desai, 1974.
5. Consumption Pattern in Rural Gujarat: A Study of Four Villages in Anand Taluka, by V.C. Patel, August, 1973.
6. Drought Prone Area Programme: A Study of the Banaskantha District in Gujarat (Kharif 1972-73) by K.M. Choudhary and R. D. Sevak, October, 1973.
7. Saving and Investment in an Agriculturally Prosperous Area (A Study in the Kota District, Rajasthan), 1970-71, by S. L. Bapna and N.R. Shah, December, 1973.
8. Development of Agricultural in the Backward Regions of Gujarat: Facts and Issues, by Mahesh T. Pathak, Mahendra D. Desai and A.S. Charan, January, 1974.

### II. Problem-Oriented Studies in Progress:

1. Saving and Investment in an Agriculturally Prosperous Area (A Case Study of the Surat District in Gujarat).
2. Saving and Investment in an Agriculturally Prosperous Area (A Study in the Kota District, Rajasthan), 1971-72.
3. Employment Pattern in Rural Gujarat (A Study of Four Villages in the Anand Taluka), 1970-71.
4. Drought Prone Area Programme : A Case Study of the Banaskantha District in Gujarat (Rabi & Summer 1972-73), by R.D. Sevak, March, 1975.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. The work of compilation of data for the year 1972-73 was completed during the year. Simultaneously, the preliminary compilation of the data collected during 1973-74 was also taken up and substantial progress was achieved in this regard.

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## **WORK DONE DURING THE YEAR 1974-75**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 1975, is as under:-

### **I. Project Work Completed**

1. Employment Pattern in Rural Gujarat (A Study of Four Villages in the Anand Taluka), 1970-71, by V.C. Patel, R. Indu and Vilas P. Patel, January, 1975.
2. Drought Prone Area Programme : A Case Study of the Banaskantha District in Gujarat (Rabi & Summer 1972-73), by R.D. Sevak, March, 1975.
3. A Study of Storage Space for Foodgrains (A Micro Study of Cambay Taluka, Gujarat), by S. L. Bapna, February, 1975.

### **II. Problem-Oriented Studies in Progress:**

1. Employment Situation in Dry Agriculture: A Study in an IDAD Project Area (Rajkot Taluka, Gujarat).
2. Saving and Investment in an Agriculturally Prosperous Area: A Case Study of the Surat District, 1971-72.
3. Saving and Investment in an Agriculturally Prosperous Area (A Case Study in the Kota District, Rajasthan), 1972-73.
4. Levels of Agricultural Development in Tehsils of Rajasthan, by M. T. Pathak and M.D. Desai, August, 1975.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. The work of compilation of data for the year 1973-74 was completed during the year. Simultaneously, the preliminary compilation of the data collected during 1974-75 was also taken up and substantial progress was achieved in this regard.



## **WORK DONE DURING THE YEAR 1975-76**

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Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 1976, is as under:-

### **I. Project Work Completed**

1. Saving and Investment in an Agriculturally Prosperous Area: A Study in the Kota District, Rajasthan, 1970-71, 1972-73, General Report, by S.L. Bapna and Case Studies, by H.M. Verma, October, 1975.
2. A Study of Impact of Famine and Relief Measures in Gujarat and Rajasthan (with Special Reference to the Banaskantha & Barmer Districts), by K. M. Choudhary & M.T. Bapat, December, 1975.
3. An Economic Profile of the Kadana Irrigation Project and its Command Area, by D. M. Brahmabhatt, March, 1976.

### **II. Problem-Oriented Studies in Progress:**

1. Factors Affecting Milk Supply to Co-operative Dairies in Gujarat: A Study of Amul and Dudhsagar Dairies.
2. Saving and Investment in an Agriculturally Prosperous Area (A Study in the Surat District, Gujarat) Combined Report 1969-70/1971-72.
3. Transforming Tribal Agriculture (An Evaluation of the Leap Forward Project of the Gujarat State Fertilizers Company Ltd.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. The work of compilation of data for the year 1974-75 was completed during the year. Simultaneously, the preliminary compilation of the data collected during 1975-76 was also taken up and substantial progress was achieved in this regard.

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## WORK DONE DURING THE YEAR 1976-77

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 1977, is as under:-

### I. Project Work Completed

1. Factors Affecting Milk Supply to Co-operative Dairies in Gujarat: A Study of Amul and Dudhsagar Dairies, by V.C. Patel & M.D. Desai, April, 1976.
2. Saving and Investment in an Agriculturally Prosperous Area (A Study in the Surat District, Gujarat) Combined Report 1969-70/1971-72, General Report by M.D. Desai and Case Studies, by A.D. Chauhan, July, 1976.
3. Transforming Tribal Agriculture (An Evaluation of the Leap Forward Project of the Gujarat State Fertilizers Company Ltd., by D.M. Brahmbhatt & M. T. Bapat, September, 1976.

### II. Problem-Oriented Studies in Progress:

1. Some Aspects of Agricultural Development in Gujarat (1949-50 -1974-75) (A Review & Final Report).
2. An Evaluation of Drought Prone Area Programme (A Study of the Jodhpur and Jaisalmer Districts in Rajasthan).
3. 4 P Plan-Crop Insurance Scheme for Hybrid-4 Cotton in Gujarat (An Evaluation of the Promotional Project "Package of Practices for Productivity and Prosperity" of the GSFC Ltd.).

### III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. The work of compilation of data for the year 1975-76 was completed during the year. Simultaneously, the preliminary compilation of the data collected during 1976-77 was also taken up and substantial progress was achieved in this regard.

### IV. Other Activities

- 1) *Organisation of a High Level Seminar on Kadana Command Area Development.*

The Governing Body of the Centre had emphasized the importance of the Centre's study entitled "Economic Profile of the Kadana Irrigation Project and Its Command Area". It had therefore

suggested that the Centre should organize a high level seminar for discussing the problems of Kadana Command Area Development. Keeping in view the importance which the Government of India attaches to the programme of command area development of major irrigation projects, the Centre organized a one day high level seminar under the joint auspices of the Agro-Economic Research Centre, the Sardar Patel University and the Forum for Development of Gujarat. Four key papers were submitted for the Seminar discussion. The Seminar deliberations took place under the Chairmanship of Shri H. M. Patel, I.C.S (Retd.). It was attended by experts belonging to various disciplines such as economics, agronomy, engineering and public administration. The participants issued, at the end of the Seminar, a Statement of Consensus of Views expressed at the seminar. The Government of Gujarat and the Gujarat State Fertilizers Co. Ltd., provided the financial support required for organizing the above seminar. Arrangements are now being made for publishing the proceedings of this Seminar.

*2) Integrated Rural Development Project of the Sardar Patel University:*

Dr. M. S. Swaminathan, Director-General, I.C.A.R had requested all the universities to consider a proposal for formulating and implementing an action programme for Integrated Rural Development. The Sardar Patel University decided to undertake an action programme for Integrated Rural Development in four villages in the vicinity of Vallabh Vidyanagar with a view especially to help the weaker sections in these villages. In order to evolve an inter-disciplinary approach for this pilot project, the inter-disciplinary approach for this pilot project, the University has decided to associate with this project experts from various subjects such as economics, commerce, education, home science, agriculture and engineering. The Vice-Chancellor asked the Centre to help in this project by providing technical guidance and assistance in undertaking a quick socio-economic survey of the villages and preparing brief reports for integrated development.

*3) Preparation of a Technical Note for the Kaira District Central Cooperative Bank:*

The Kaira District Central Co-operative Bank requested the Centre to prepare a note on the Ceiling Fixed by the Reserve Bank of minimum lending to small/marginal farmers by the District Co-operative Bank in the Kaira District. This note was submitted to the Bank in March. 1977.

- 4) Shri M. D. Desai, Deputy Director, assisted the Editorial Committee, Second Asian Agricultural Survey, Asian Development Bank in finalizing the draft of the report on the Second Asian Agricultural Survey. He was appointed on the following committees by the Gujarat Agricultural University: (1) Sub-Committee of the Research Council (ii) Special Committee of the Research Council (iii) Sub-Committee for strengthening research in agricultural economics in the campuses of the University.
- 5) Shri R. M. Patel, Research Officer, was appointed as a member of the Sub-Committee of the Research Council of the Gujarat Agricultural University. He delivered a lecture on Integrated Approach to the Solution of the Problems of Marginal Farmers and laborers, at the Extension Education Institute of the Gujarat Agricultural University, Anand Campus.
- 6) Shri K. M. Chaudhary, Research Officer, was invited by the Indian Council of Social Science Research, New Delhi to prepare a report on the problems of Dairy Development in Gujarat. He has been invited by the Agricultural Development Council, New York, to participate in the International Seminar on the Experience and Potential for Group Farming in South and South-East Asia to be held at Singapore during August 1977. He has also been invited to prepare a paper for the above Conference.
- 7) Shri B. I. Kumbhar, Investigator and Miss Vilas P. Patel, Tabulation Assistant were awarded Prof. V. S. Vyas Prize of Rs. 150/- each as the best supporting research workers in the Centre for the years 1975-1977. Shri V. M. Patel Research Assistant was also awarded a special prize of Rs. 150/- for his good work.
- 8) Shri Bhanwarsingh, a Research Scholar from the Institute of Development Studies, Sussex, working at the Gujarat Institute of Area Planning, Ahmedabad, visited the Centre in May 1976 in connection with his PhD research work.
- 9) Shri J. D. Srivastava, Consultant on Forage Production, Madhya Pradesh Dairy Development Corporation, visited the Centre for consultation on problems of dairy development in Madhya Pradesh during June 1976.
- 10) Dr. Dov Chernichovsky of the World Bank, U. S. A., visited the Centre in August 1976 to acquaint himself with the present research activities of the Centre and to discuss his further programme.

- 11) Dr. Victor S. Doherty, Social Anthropologist and Dr. N. S. Jodha, Associate Economist in the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Hyderabad, visited the Centre in February 1977 in connection with their researchers and had discussion with senior members of the staff.
- 12) Prof. V. K. Madalia of the South Gujarat University and Prof. B. Joshi of the Saurashtra University visited the Centre in April-May 1976 for consultations and reference work for their PhD work.

## **V. Conferences and Seminars**

- (1) Shri M. D. Desai, Deputy Director attended the XVI International Conference of the Agricultural Economists held at Nairobi from 26<sup>th</sup> July to 4<sup>th</sup> August 1976. He acted as a consultant at the group discussion on "Rural Development".
- (2) Sarvashree R. M. Patel, Research Officer, R. D. Sevak, Statistical Assistant and B. L. Kumbhar, Investigator were deputed to attend the 36<sup>th</sup> Annual Conference of the Indian Society of Agricultural Economics held at Surat from 17<sup>th</sup> to 19<sup>th</sup> November, 1976. Shri B. L. Kumbhar prepared a paper entitled "Changes in the Structural Distribution of Land Ownership and Operation in Rural Rajasthan: for the Conference. (This paper was accepted for publication in the conference volume in summary form).
- (3) Dr. M. T. Pathak, Hon. Director, participated in the Seminar on "Gujarat Economy in 2001 AD - A Study in perspective" from 12<sup>th</sup> to 14<sup>th</sup> August 1976, organized by Sardar Patel Institute, Ahmedabad. He chaired one of the sessions.
- (4) Sarvashree N. R. Shah, Research Officer, Shri D. M. Brahmabhatt, Senior Research Assistant and M. T. Bapat, Senior Research Assistant, were deputed to attend the Gujarat Economic Conference held at Nadiad on 2<sup>nd</sup> and 3<sup>rd</sup> October 1976. Shri N. R. Shah prepared a key paper entitled "Economics of Scale in Agriculture: A Case Study of Kaira District in Gujarat" (jointly with Dr. A. S. Patel of the Department of Economics, Sardar Patel University).  
Shri N. T. Patel, Agricultural Supervisor, attended the conference at his own.
- (5) Shri H. F. Patel, Statistical Assistant and Shri V. D. Shah, Statistical Assistant attended the Fifth Conference of the Gujarat Statistical Association organized by the Indian Institute of Management, Ahmedabad, on December 26-27, 1976. Shri R. D. Sevak, Statistical Assistant attended the Conference on his own.

- (6) All the staff members of the Centre attended the Seminar on the Kadana Command Area Development held at Vallabh Vidyanagar on the 13<sup>th</sup> November, 1976.
- (7) Shri R. M. Patel, Research Officer, attended the Seminar on "Problems of Dairy Development in Gujarat" organized by the Gujarat Association of Agricultural Sciences at Anand Campus of Gujarat Agricultural University.

## VII. Research Papers Prepared/Published

Sr. No.	Title	Author	Journal in which published
1	Development of Kadana Command Area : A Review	Dr. M. T. Pathak, Shri M .D. Desai & D. M. Brahmbhatt	Prepared for the Kadana Command Area Seminar.
2	Levels of Agricultural Development in Tehsils of Rajasthan	Dr. M. T. Pathak & Shri M .D. Desai	Artha-Vikas, Vol. XII, No. 2, July-Dec. 1976
3	Transforming Tribal Agriculture.	M. T. Bapat & D. M. Brahmbhatt	Artha-Vikas, Vol. XII, No. 2, July-Dec. 1976
4	Economics of Scale in Agriculture : A case study of Kaira District	N. R. Shah (jointly with Dr. A. S. Patel)	Presented as key paper at the 8 <sup>th</sup> Gujarat Economic Conference.
5	Changes in the Structural Distribution of Land ownership and operation in Rural Rajasthan (in summary form)	B. L. Kumbhar	Indian Journal of Agricultural Economics Conf. No. Vol. XXXI, No. 3 July-Sept. 1976
6	Impact of HYV on Farm Income Distribution : A case Study of Kota	B. L. Kumbhar	The Economic Times, March 29, 1977.
7	Declining Trend in the production of Pulses and Factors Affecting it.	B. L. Kumbhar	(Accepted for publication in the Economic & Political Weekly)

## **WORK DONE DURING THE YEAR 1977-78**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 1978, is as under:-

### **I. Project Work Completed**

1. Some Aspects of Agricultural Development in Gujarat (1949-50 -1974-75) (A Review & Final Report), by Mahesh Pathak, M.D. Desai and H.F. Patel, April, 1977.
2. An Evaluation of Drought Prone Area Programme (A Study of the Jodhpur and Jaisalmer Districts in Rajasthan), by R.D. Sevak and S.D. Purohit, Case Study by V.M. Patel, May, 1977.
3. 4 P Plan-Crop Insurance Scheme for Hybrid-4 Cotton in Gujarat (An Evaluation of the Promotional Project "Package of Practices for Productivity and Prosperity" of the GSFC Ltd.), by K.M. Choudhary, August, 1977.
4. Working of Farmers' Service Societies in Gujarat (Two Case Studies of Tribal Areas in Gujarat) by D.M. Brahmhatt & M. T. Bapat, January, 1978.

### **II. Problem-Oriented Studies in Progress:**

1. Economic Relationship between Crop Farming and Dairying in a Developing Area: A PL-480 Micro-Level Study of South Gujarat.
2. Block Level Plan, Balasinor Taluka (Kheda District, Gujarat.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. The work of compilation of data for the year 1976-77 was completed during the year. Simultaneously, the preliminary compilation of the data collected during 1977-78 was also taken up and substantial progress was achieved in this regard.

## **WORK DONE DURING THE YEAR 1978-79**

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Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 1979, is as under:-

### **I. Project Work Completed**

1. Economic Relationship between Crop Farming and Dairying in a Developing Area: A PL-480 Micro-Level Study of South Gujarat, by A. S. Patel and N.S. Jodha, January, 1979.

### **II. Problem-Oriented Studies in Progress:**

1. Performance of Hybrid Bajra in Gujarat, 1966-67 to 1976-77.
2. Block Level Plan, Balasinor Taluka (Kheda District, Gujarat), by Mahesh Pathak and N.R. Shah, October, 1979.
3. Agricultural Development in Gujarat, 1949-50 to 1974-75.
4. Evaluation of Integrated Dry Land Agricultural Development Programme in Rajkot Taluka, Gujarat (Follow-up study for 1977-78 and 1978-79).
5. Evaluation of Intensive Cotton Development Programme and study of Economics of Use of Insecticides and Pesticides in Cotton in Baroda District.
6. Aspects of Production and Marketing of Mangoes in Gujarat.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. The work of compilation of data for the year 1977-78 was completed during the year. Simultaneously, the preliminary compilation of the data collected during 1978-79 was also taken up and substantial progress was achieved in this regard.

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## **WORK DONE DURING THE YEAR 1979-80**

### **I. Project Work Completed**

1. Block Level Plan, Balasinor Taluka (Kheda District, Gujarat), by Mahesh Pathak and N.R. Shah, October, 1979.
2. Performance of Hybrid Bajra in Gujarat, 1966-67 to 1976-77, by R.D. Sevak and D. M. Brahmbhatt, March, 1980.
3. Agricultural Development in Gujarat, 1949-50 to 1974-75.
4. Evaluation of Integrated Dry Land Agricultural Development Programme in Rajkot Taluka, Gujarat (Follow-up study for 1977-78 and 1978-79).
5. Evaluation of Intensive Cotton Development Programme and study of Economics of Use of Insecticides and Pesticides in Cotton in Baroda District.

### **Village Resurveys:**

1. Borsad Taluka, Gujarat
2. Jambua, Panchmahal District, Gujarat (Change in Socio-Economic Life of a Tribal Village).

### **II. Problem-Oriented Studies in Progress:**

1. Block Level Plan, Thasra Taluka (Kheda District, Gujarat).
2. Aspects of Production and Marketing of Mangoes in Gujarat.
3. Working of Public Distribution System in Backward Areas in Rajasthan.
4. Repaying capacity of the farmers based on the incremental income assumed for term investment on loans given by the Land Development Banks in Gujarat.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. The work of compilation of data for the year 1978-79 was completed during the year. Simultaneously, the preliminary compilation of the data collected during 1979-80 was also taken up and substantial progress was achieved in this regard.

## **WORK DONE DURING THE YEAR 1980-81**

This report provides a brief review of the work done at Centre during the year ending 31<sup>st</sup> March, 1981.

### **I. Field Work:**

The centre arranged for fieldwork in respect of the following research projects:

- 1) 'Marketing of Mangoes in Gujarat'-Primary data relating to the reference years 1979-80 and 1980-81 were collected in two rounds for 120 households from three villages of south Gujarat.
- 2) 'Evaluation of small farmers Development Agency in Udaipur District, Rajasthan'- Field survey was organised for 150 households in Udaipur District, Rajasthan.
- 3) 'Evaluation of Small farmers Development Agency in Bharuch District, Gujarat'- Field survey work was organised for collecting primary data from 100 households in Bharuch District, Gujarat.

### **II. Project Reports Completed:**

- 1) Formulation of Block Development Plan for Thasra Taluka, Kheda District, Gujarat -This project was entrusted to the centre by the Government of Gujarat. The draft project report submitted to the Government has been formally approved. This report will not be printed for final circulation.

### **III. Problem Oriented Studies in Progress:**

- 1) Inter-District Variations in Agricultural Development in Gujarat: 1948-19 to 1978-79. This project has been entrusted to the centre by the Ministry of Agriculture & Irrigation, Government of India. The work relating to data processing for this project was completed by the end of March, 1981.
- 2) A follow up study of Integrated Dry Land Agricultural Development Programme in Rajkot District, Gujarat- This study has also been entrusted to the centre by the Ministry of Agriculture & Irrigation, Government of India. The work relating to scrutiny and tabulation of data collected for the reference years 1977-78 and 1978-79 was completed.
- 3) Evaluation of Intensive Cotton Development Programme in Baroda District, Gujarat- This project has been entrusted to the centre by the Ministry of Agriculture & Irrigation, Government

of India. The first draft of this project was prepared and subsequently finalized during the year. The final report is expected to be circulated in May, 1981.

- 4) Marketing of Mangoes in Gujarat- This common study has been entrusted to the centre by the Ministry of Agriculture & Irrigation, Government of India. Two rounds of field work completed during the year for collecting primary data for the reference year 1978-79 and 1979-80. Work relating to scrutiny and data processing was undertaken during the year.
- 5) Evaluation of Small farmers Development Agency in Udaipur District, Rajasthan- This project has been entrusted to the centre by the Ministry of Agriculture & Irrigation, Government of India. Field survey for collecting primary data from 150 households was completed during the year. Work relating to data processing was also taken up during the year.
- 6) Evaluation of Small farmers Development Agency in Bharuch District, Gujarat- This project has been entrusted to the centre by the Ministry of Agriculture & Irrigation, Government of India. Secondary data were collected during the year. Schedules were finalized. However, organisation of Field survey work was delayed due to disturbed conditions in Gujarat. Hence, field survey could be undertaken and completed in March, 1981.
- 7) Use of Soil Testing Service by Farmers of Rajasthan- This project has been entrusted to the centre by the Ministry of Agriculture & Irrigation, Government of India. Preliminary reference work was completed and a large volume of secondary data required for the project was collected during the year. Schedules for field survey were also finalized.
- 8) Impact of Intensive Oilseeds Development Programme in Gujarat- This project has been entrusted to the centre by the Ministry of Agriculture & Irrigation, GOI. Preliminary work relating to this project was initiated during the year.

#### **IV. Village Surveys/Resurveys in Progress:**

- 1) Resurvey of Borsad Taluka, Gujarat- The draft report relating to this project was completed and also revised during the year. This report will be circulated by May, 1981.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The selection and census work of 10 sample talukas (30 villages) for undertaking field work during the year 1980-81 was completed. The work of preliminary tabulation for the reference years 1979-80 was completed and sent to the Directorate.

### **VI. Other Activities:**

1. This Agro-Economic Research Centre organised, in collaboration with the Indian Society of Agricultural Economics, an All-India seminar on Crop Insurance at Vallabh Vidyanagar on 6-7, February, 1981. The Seminar was attended by leading economists and senior representatives of Commercial Banks, State Cooperative Banks, Fertilizer companies, Agricultural Universities and State Governments. The senior staff members of the Centre-Sarvashree Mahesh Pathak, D.M. Brahmbhatt, V.C. Patel, R. Indu, M.T. Bapat, R.D. Sevak and V.D. Shah attended the above seminar. Shri K. M. Choudhary also contributed a status paper for this seminar.
2. Dr. Mahesh Pathak, Shri R. M. Patel, Shri D.M. Brahmbhatt and Shri S.D. Purohit attended the All-India Agricultural Economics Conference held at Pune on 30-31 December, 1980 and 1<sup>st</sup> January, 1981.
3. Dr. Mahesh Pathak, Shri R. M. Patel, Shri M.T. Bapat and Shri V.D. Shah attended the Annual Conference of the Gujarat Economic Association held at Ahmedabad on the 1<sup>st</sup> & 2<sup>nd</sup> November, 1980.
4. Dr. Mahesh Pathak, Shri R. M. Patel attended a meeting of the Research Council of Gujarat Agricultural University held at Navsari during 22<sup>nd</sup> to 24<sup>th</sup> May, 1980.
5. Sarvashree K. M. Choudhary, N. R. Shah, D. M. Brahmbhatt, V. C. Patel, R. Indu, M.T. Bapat and R. D. Sevak assisted in preparing status papers required for the preparation of the Block level Plan for Thasra Taluka, Kheda District, Gujarat.
6. Shree K. M. Choudhary was invited by the Chairman of the Mahisagar Collective Cooperative Farming Society, Gambhira, to prepare a note on the progress made by the society during the last 25 years.
7. Shri R. D. Sevak and Shri V. D. Shah attended the Annual Conference of the Gujarat Statistical Association held at Bhavnagar during 26-28, December, 1980.

8. Dr. Mahesh Pathak was invited by the Gujarat Institute of Area Planning, Ahmedabad, to be a member of the committee of Direction constituted for its research project entitled Development of Social Indicators. He was also invited to be a member of the Editorial Board of ICSSR Journal Abstracts & Reviews; Economics.

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## WORK DONE DURING THE YEAR 1981-82

This report provides a brief review of the work done in the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar, during the year ending 31<sup>st</sup> March, 1982.

### I. Field Work:

The centre arranged for fieldwork in respect of the following research projects:

- 1) Use of Soil testing service by Farmers in Rajasthan- Field Survey of 100 households was completed during the year.
- 2) Impact of Intensive Oil seeds Development Programme in Junagadh District, Gujarat- Primary data relating to reference year 1980-81 were collected for 115 households from 6 villages of Junagadh District, Gujarat.
- 3) ARDC: Evaluation Study of Minor Irrigation in Gujarat (Baroda & Ahmedabad Districts)- Field work was organised for 240 households for the reference year 1980-81.
- 4) ARDC: Evaluation Study of Dairy Development Programme in Sabarkantha District, Gujarat- Field survey work was organized for collecting primary from 100 households.

### II. Project Reports Completed:

- 1) Evaluation of Intensive Cotton District Programme and Aerial Spraying Scheme in Baroda District, Gujarat, by K. M. Choudhary.

This project was entrusted to the centre by the Ministry of Agriculture & Irrigation, Government of India. The final report was circulated in May, 1981.

- 2) Formulation of Block Development Plan for Thasra Taluka, Kheda District, Gujarat. (Gujarati Version).

### III. Problem Oriented Studies in Progress:

- 1) Inter-District Variations in Agricultural Development in Gujarat- This project has been entrusted to the centre by the Ministry of Agriculture & Irrigation, Government of India. The work of finalizing this report is nearing completion.
- 2) A follow-up study of Integrated Dry Land Agricultural Development Programme in Rajkot District, Gujarat- This study has also been entrusted to the centre by the Ministry of

Agriculture & Irrigation, Government of India. The data processing work has been nearly completed during the year.

- 3) Marketing of Mangoes in Gujarat- This common study has been entrusted to the centre by the Ministry of Agriculture & Irrigation, Government of India. The work of drafting the report continued during the year and is likely to be completed shortly.
- 4) Evaluation of Small farmers Development Agency in Udaipur District, Rajasthan- This project has been entrusted to the centre by the Ministry of Agriculture & Irrigation, Government of India. The work of drafting is in progress.
- 5) Evaluation of Small farmers Development Agency in Bharuch District, Gujarat- This project has been entrusted to the centre by the Ministry of Agriculture & Irrigation, Government of India. The work of drafting is in progress.
- 6) Use of Soil Testing Service by Farmers of Rajasthan- This project has been entrusted to the centre by the Ministry of Agriculture & Irrigation, Government of India. Tabulation work of primary data has been completed. The secondary data have been analyzed and the report is expected to be finalized in the near future.
- 7) Impact of Intensive Oilseeds Development Programme in Junagadh District, Gujarat- This project has been entrusted to the centre by the Ministry of Agriculture & Irrigation, Government of India. The field survey work has been completed during the year.
- 8) Bench-Mark Socio-Economic Survey of the Narmada Command Area (Ahmedabad District), Gujarat- This project has been entrusted to the centre by the Government of Gujarat on a priority basis as it has to prepare the identification report of the command area for submission to the World Bank.

#### **IV. Village Surveys/Resurveys in Progress:**

- 1) Glimpses of change and Development in Borsad Taluka, Gujarat. This report has been finalized for circulation.

#### **V. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

From 1981-82, the Directorate of Economics & Statistics, Ministry of Agriculture & Irrigation, Government of India suggested a new approach to the study of Principal crops of Gujarat. This is known as crop complex approach according to which from major crops of Gujarat viz., Cotton, Groundnut, Bajra and Jowar are to be studied in seven crop zones of Gujarat continuously for 3 years. Hence, to cater to the needs of the new approach, all the 40 clusters

consisting of 120 villages were selected afresh and 480 sample farmers representing different size groups of holdings were selected. This time-consuming work was completed during the year. Every month the schedules are being received from all the 40 clusters which are being checked and kept ready for final compilation. Compilation work of 40 clusters for the year 1980-81 was completed and sent to the Directorate.

## **VI. Other Activities:**

- 1) Prof. V. S. Vyas Prize for preparing the best research reports during the two year period from 1979-80 to 1980-81 was awarded to the following reports:-
    - a) Some Aspects of Agricultural Development in Gujarat by M. T. Pathak, M.D. Desai and H.F. Patel
    - b) JAMBUA (Panchmahals District, Gujarat): Change in Socio-Economic Life of Tribal Villages by V.C. Patel.
  - 2) Dr. Mahesh Pathak, Honorary Director, was invited by the Government of Gujarat to be a member of the Land Revenue Revision and Stamp Duty Review Committee. He also attended a Seminar on Development of Gujarat organised by the Sardar Patel Institute of Economic and Social Research, Ahmedabad, in 1981 and Contributed a key paper on Agricultural Development in Gujarat: Problems and Prospects.
  - 3) Shri R. M. Patel
    - a) Delivered a talk at Anand campus of Gujarat Agricultural University on "Multi-Agency Approach for promoting Agricultural Development in Dry Land Areas" on 7<sup>th</sup> September, 1981.
    - b) Attended the meeting of the sub-committee on Agricultural Economics, Statistics & Extension Education held on 4<sup>th</sup> May, 1981, at Anand campus of Gujarat Agricultural University.
    - c) Attended the junior sub-committee's meeting held at Anand campus on the 2<sup>nd</sup> June, 1981.
    - d) Attended the sub-committee meeting of Animal Production Technology and Health on 5-5-1981 held at Veterinary College, Anand.
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## **WORK DONE DURING THE YEAR 1982-83**

This report provided a brief review of work done in the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar, during the year ending 31<sup>st</sup> March, 1983.

### **I. Project Reports Completed**

1. Inter District variations in Agricultural Development in Gujarat by Dr. Mahesh Pathak and H.F. Patel- This report is based on district level data for 30 years from 1949-50 to 1978-79. This project was entrusted to the Centre by the Ministry of Agriculture & Irrigation, Government of India.
2. Soil Testing Service in Rajasthan (A Case Study of Sriganganagar Soil Testing Laboratory) by Shri R.D. Sevak- This project was entrusted to the Centre by the Ministry of Agriculture & Irrigation, Government of India.
3. Socio- Economic Profile- Narmada Command Area (Ahmedabad District), First Phase Report- This project work has been entrusted to the Centre by the Government of Gujarat. The first phase report is based on secondary data.
4. Glimpses of Change and Development in Borsad taluka by Shri R.M. Patel -This project was entrusted to the Centre by the Ministry of Agriculture & Irrigation, Government of India. It is a comparative study based on secondary and primary data.
5. Evaluation of Minor Irrigation Project in Gujarat (Baroda and Ahmedabad Districts) -This project work has been entrusted to the Centre by NABARD, Bombay. The draft report was submitted during the year to NABARD. The Centre will be revising this report in the light of the comments received from NABARD and Gujarat Water Resource Development Corporation.

### **II. Problem Oriented Studies in Progress:**

1. A follow-up Study of Integrated Dry Land Agriculture Development Programme in Rajkot District, Gujarat- This project was entrusted to the Centre by the Ministry of Agriculture & Irrigation, Government of India. The work of tabulation and report writing continued during the year.
2. Marketing of Mangoes in Gujarat-This project was entrusted to the Centre by the Ministry of Agriculture & Irrigation, Government of India. The work of drafting has been completed during the year and this report will be released shortly.

3. Evaluation of Small Farmers Development Agency in Udaipur District, Rajasthan- This project was entrusted to the Centre by the Ministry of Agriculture & Irrigation, Government of India. This report has been finalized for circulation.
4. Impact of Oil-Seed Development Programme in Junagadh District, Gujarat- This project was entrusted to the Centre by the Ministry of Agriculture & Irrigation, Government of India. The tabulation work continued during the year.
5. Bench- Mark Socio - Economic Survey of the Narmada Command Area (Ahmedabad District, Gujarat)-This project work has been entrusted to the Centre by the Government of Gujarat. Field Survey work of the second phase has been completed. Tabulation work also completed substantially.
6. Evaluation of dairy Development Programme in Gujarat- This project work has been entrusted to the Centre by NABARD. Tabulation & report writing continued during the year.
7. Repayment of Gujarat Land Development Bank Loans- This project was entrusted to the Centre by the Ministry of Agriculture & Irrigation, Government of India. Required secondary data were collected during the year and the sample design was finalized for field works.
8. Public Distribution System in Rajasthan - This project was entrusted to the Centre by the Ministry of Agriculture & Irrigation, Government of India. Preliminary work has been completed and the project design finalized during the year. The field survey work has been planned during April, 1983.
9. Management of Social Forestry in Rajasthan -Initially the Centre was expected to take up this project in Gujarat. However, subsequently it has been asked to take up the evaluation study in Rajasthan.
10. Problems and Prospects of Cultivation of Pulses in Gujarat- This project was entrusted to the Centre by the Ministry of Agriculture & Irrigation, Government of India. Preliminary work relating to this project was completed during the year.
11. Cost of Milk Production with reference to Small and Marginal farmers-This project was entrusted to the Centre by the Ministry of Agriculture & Irrigation, Government of India. The Centre is expected to take up this study in both Gujarat and Rajasthan. Preliminary work relating to this project was completed.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

From 1981-82, the Government has suggested a new approach in which principal crops are to be studied in seven crop zones of

Gujarat state continuously for 3 years. In this new crop complex approach 480 sample farmers of different size groups were selected from 120 villages of 40 clusters. Compiled data of all the 40 clusters for the year 1981-82 been sent to the Directorate. Primary data for the year 1982-83 have been collected.

#### **IV. Other Activities**

1. Dr. Mahesh Pathak, Shri R.M. Patel, Shri V.C. Patel, Shri D.M. Brahmbhatt, Shri M.T. Bapat and Shri A.D. Thakkar attended the 14<sup>th</sup> Gujarat Economic Conference held at Baroda on the 7<sup>th</sup> and 8<sup>th</sup> November, 1982.
  2. Sarvashree R.M. Patel, Shri V.C. Patel, A.D. Thakkar, J.C. Patel, M.S. Jayswal and U.R. Singh attended the Regional Technical Workshop on Western Region for Cost of Cultivation Project held at the Agro - Economic research centre, Jabalpur, from 9<sup>th</sup> to 11<sup>th</sup> February 1982.
  3. The centre arranged for providing data relating to cost of cultivation for three years from 1974-75 to 1976-77 to the Tata Economic Consultancy Services. These data were required for preparing the Economic Feasibility Report for Narmada Project.
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## WORK DONE DURING THE YEAR 1983-84

Report of the work done during the last three years ending March 1984.

### I. Research Studies Completed

1. Evaluation of Intensive Cotton District Programme and Aerial Spraying Scheme in Baroda district, Gujarat, by K.M. Choudhary. The project sponsored by Ministry of Agriculture & Irrigation, Government of India.
2. Formulation of Block Development Plan for Three Taluka, Kheda District, Gujarat (Gujarati Version). Project sponsored by the Government of Gujarat.
3. Inter District variations in Agricultural Development in Gujarat by Dr. Mahesh Pathak and H.F. Patel. Project sponsored by the Ministry of Agriculture & Irrigation, Government of India.
4. Soil Testing Service in Rajasthan (A case Study of Sriganganagar Soil Testing Laboratory) by R.D. Sevak. Project sponsored by the Ministry of Agriculture & Irrigation, Government of India.
5. Socio-Economic Profile- Narmada Command Area (Ahmedabad District) First Phase Report. Project sponsored by the Government of Gujarat.
6. Glimpses of Change and Development in Borsad taluka by R.M. Patel. Project sponsored by the Ministry of Agriculture & Irrigation, Government of India.
7. Evaluation of Minor Irrigation Project in Gujarat (Baroda and Ahmedabad Districts). "Economics of Tubewell Irrigation in Gujarat", Project sponsored by the NABARD, Bombay.
8. Evaluation of Small Farmers Development Agency in Udaipur District, Rajasthan, by S.D. Purohit. Project sponsored by the Ministry of Agriculture & Irrigation, Government of India.
9. Evaluation of Small Farmers Development Agency in Surat District, Gujarat, by M.T. Bapat. Project sponsored by the Ministry of Agriculture & Irrigation, Government of India.
10. Production and Marketing of Mangoes in Gujarat, by D.M. Brahmbhatt. Project sponsored by the Ministry of Agriculture & Irrigation, Government of India.

II. Apart from completing the above studies, the Agro-Economic Research Centre has completed field work relating to several projects such as (a) Evaluation of Oil Seeds development Programme in Gujarat, (b) Evaluation of Dairy Development Programme in Gujarat, (c) Repayment of Land Development Bank

Loans, (d) Evaluation of Public Distribution System in Rajasthan, (e) Cost of Milk Production in Gujarat.

- III.** The Government of Gujarat had entrusted to the Centre a Bench Mark Socio- Economic Survey of the Narmada Command Area covering six taluka of Ahmedabad District. Phase-I report based on comprehensive secondary data has already been submitted to the Government. In Phase -II a large scale field survey involving 2400 households located in six taluka has been completed. Priority tables required by the Government have been submitted. The entire tabulation work is also over and the second report based on field survey is to be submitted shortly.
- IV.** Ministry of Agriculture & Irrigation has entrusted to the Centre a Scheme for the Cost of Cultivation of Principal Crops in Gujarat. The Centre has collected for the year 1981-82 and 1982-83 cost of cultivation data from 480 sample farmers located in 120 villages of Gujarat. During the year 1983-84, such data have been collected from 600 farmers located in 180 villages of Gujarat.

The Government of Gujarat had asked Tata Consultancy Services to prepare Economic Feasibility Report for the Narmada Project. The Tata Consultancy Services required cost of cultivation data for this purpose. The Agro-Economic Research Centre had made a special effort to compile the cost of cultivation data for three years from 1974-75 to 1976-77. The TCES has used these data for its report submitted to the Government of Gujarat.

The Government of Gujarat has asked the Agro-Economic Research Centre to organize a workshop for the officers of the Agriculture Department to discuss the main findings of its report entitled "*Inter-District variations in Agricultural Development in Gujarat*". Several officers of the Department of Agriculture, Gandhinagar, Directorate of Agriculture, Ahmedabad and most of the District Agriculture Officers participated in this workshop held at Vallabh Vidyanagar during 1983.

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## **WORK DONE DURING THE YEAR 1984-85**

This report provided a brief review of work done in the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar, during the year ending 31<sup>st</sup> March, 1985.

### **I. Project Reports Completed**

1. Economic of Tubewell Irrigation in Gujarat (Baroda-Ahmedabad districts, Gujarat).
2. Economics of Dairy Development Programme in Gujarat (Sabarkantha district, Gujarat).
3. Socio- Economic Profile- Narmada Command Area (Ahmedabad District).

### **II. Problem Oriented Studies in Progress**

1. A Follow-up study of Integrated Dry Land Agricultural Development Programme in Rajkot Taluka, Gujarat.
2. Impact of Intensive Oilseeds development programme, Junagadh District, Gujarat.
3. Repayment of Gujarat Land Development Bank Loans, in Gujarat.
4. Evaluation of Public Distribution System in Rajasthan.
5. Management of Social Forestry in Rajasthan.
6. Problems and Prospects of Cultivation of Pulses in Gujarat.
7. Cost of Milk Production in Gujarat and Rajasthan.
8. Evaluation of National Rural Employment Programme in Gujarat.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Scheme has been entrusted to the Agro-Economic Research Centre since 1970. The Government of India had appointed an Expert Committee under the Chairmanship of Dr. S.R. Sen to review the working of this scheme. The working of this scheme has been modified in the light of the recommendations made by this Committee. In Gujarat, the cost of cultivation data were earlier collected from 40 clusters (each cluster consisting of two to three villages). But now the Government of India has increased the number of clusters from 40 to 60. In this context the following additional staff has been provided for this purpose: 4 Agricultural Supervisors; 4 Computers; 22 Agricultural Assistants; 1 Typist/Clerk; 1 Clerk/Typist

Except four reserve Agricultural Assistants, all the above posts have been filled up and the work has been reorganized on the lines of the crop complex approach suggested by the Sen Committee. Under the crop complex approach the sampling design has been modified since 1981-82 for the selection of clusters and the selection of cultivators from the clusters. Now from each cluster 10 cultivator have been selected from 5 fixed size groups of operational holdings viz. marginal (below 1 hectare), Small (1 to 2 hectares), Medium (2 to 4 hectares), Big (4 to 6 hectares) and Large (6 hectares and above). Five crops namely Bajra, Groundnut, Cotton, Arhar and Onion will be continuously studied in the same sixty clusters of Gujarat State for a period of three years (1984-85 to 1986-87). The compiled data of 60 clusters for the year 1983-84 has been sent to the Directorate of the Ministry of Agriculture and Rural Development, Government of India, New Delhi.

#### **IV. Other Activities**

1. Dr. Mahesh Pathak, Hon. Director has been invited on the following Expert Committee constituted by the Government of Gujarat: (i) Member, High Level Committee on Backward Areas under the Chairmanship of Dr. I.G. Patel; (ii) Member, High Level Committee on Development of Coastal Areas in Gujarat; (iii) Member of Narmada Planning group constituted by the Government of Gujarat for preparation of comprehensive and systematic planning studies for the Narmada project.
2. Dr. Mahesh Pathak, Hon. Director and Shri K. M. Choudhary, Deputy Director, attended 44<sup>th</sup> All- India Agricultural Economic Conference held at Bhubaneswar from 7<sup>th</sup>-10<sup>th</sup> January, 1985. Shri V. D. Shah, statistical Assistant attended the 13<sup>th</sup> Gujarat Statistics Conference held at Bilimora 24<sup>th</sup> to 26<sup>th</sup> Dec., 1984.
3. Shri V.D. Shah, Statistical Assistant attended the 13<sup>th</sup> Gujarat Statistics Conference held at Bilimora from 24<sup>th</sup> to 26<sup>th</sup> December, 1984.
4. Shri N. R. Shah, Research officer, attended a symposium on some aspects of Groundnut cultivation held at Anand Arts College, Anand, on 10<sup>th</sup> march, 1985.
5. Shri R. Indu with Dr. D. Bagchi contributed a paper on “Marxian Economics- A retreat” for the Gujarat economic Conference held at Vallabh Vidyanagar, held on the 3<sup>rd</sup> and 4<sup>th</sup> February 1985.
6. The Centre in collaboration with the department of Economics organised the 16<sup>th</sup> Gujarat Economic Conference at Vallabh Vidyanagar on the 3<sup>rd</sup> and 4<sup>th</sup> February 1985 and all the senior staff members of the Centre actively participated in the group discussions.

## WORK DONE DURING THE YEAR 1985-86

This report provides a brief review of work done in the Agro-Economic Research Centre, Sardar Patel University, during the year ending 31<sup>st</sup> March, 1986.

### I. Project Reports Completed

1. "Social Forestry Programme in Rajasthan (with Special Reference to Dungarpur and Bharatpur Districts, Rajasthan)" by Shri D. M. Brahmabhatt.
2. "Economics of Dairy Enterprises in Gujarat", by Sarvashree R.M. Patel, K. M. Choudhary, R.D. Sevak and V.D. Shah. (Final Report)

### II. Problem Oriented Studies in Progress

1. A Follow-up study of Integrated Dry Land Agricultural Development Programme in Rajkot Taluka, Gujarat.
2. Impact of Intensive Oilseeds development programme, Junagadh District, Gujarat.
3. Repayment of Gujarat Land Development Bank Loans, in Gujarat.
4. Evaluation of Public Distribution System in Rajasthan.
5. Problems and Prospects of Cultivation of Pulses in Gujarat.
6. Cost of Milk Production in Gujarat and Rajasthan.
7. Evaluation of National Rural Employment Programme in Gujarat.
8. Evaluation of Pulses Development Programme in Rajasthan.
9. Constraints in Fertilizer Consumption in Gujarat.
10. Evaluation of Action Research Programme in Mahi Kadana Command Area in Gujarat.

### III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.

The Cost of Cultivation Scheme entrusted to the Agro-Economic Research Centre since 1970 is operating in Gujarat. Since 1981-82, as per recommendations of Dr. S.R. Sen Committee, a crop complex approach has been adopted for the selection of sixty clusters. Gujarat state is divided into 8 crop zones on the basis of the important crops grown in the districts of Gujarat. Under the crop complex approach five crops namely Bajra, Groundnut, Cotton, Arhar and Onion are being studied. The sample of cultivators is drawn from 5 fixed size groups of operational holdings viz.



marginal (below 1 hectare), Small (1 to 2 hectares), Medium (2 to 4 hectares), Big (4 to 6 hectares) and Large (6 hectares and above). Ten cultivators are selected from each cluster. Thus, the total size of the sample is of 600 cultivators.

The compiled data of the year 1984-85 have been sent to the Directorate of Economics and Statistics, Government of India. The data for the year 1985-86 are in the process of final compilation.

#### **IV. Other Activities**

1. Dr. Mahesh Pathak, Hon. Director has been invited on the following Expert Committee constituted by the Government of Gujarat: (i) Member, High Level Committee on Development of Coastal Areas in Gujarat; (ii) Member of Narmada Planning group constituted by the Government of Gujarat for preparation of comprehensive and systematic planning studies for the Narmada project. He has also been elected Vice-President of the All-Indian Agricultural Economics Association.
2. Shri R. M. Patel, Deputy Director, has been nominated by Gujarat Agricultural University as : (i) Member on the Sub-Committee of Research council of Agricultural Economics, Statistics and Extension Education, (ii) Member of the Special Committee for examining research proposal of Gujarat Agricultural University, and (iii) Nominated as Honorary Advisor for Agricultural Economics in Auraville (an International town), Shri Aurobindo Society, Pondicherry.
3. Shri D.M. Brahmbhatt attended a two days' Orientation Workshop on Action Planning in Mahi Command area and was appointed as a Convener of the Committee for preparing a report on socio-economic aspects in respect of Mahi Command Area and has also been invited to participate in the second workshop on Action Programme for improving the status of irrigated agriculture in Mahi Command area at Anand on 4<sup>th</sup> & 5<sup>th</sup> December 1985. Shri D.M. Brahmbhatt's article on Social Forestry Programme in Rajasthan was published in January-December 1984 issue of Artha-Vikas.
4. The centre organised the 45<sup>th</sup> All- India Agricultural Economics Conference at Anand on 27<sup>th</sup> -29<sup>th</sup> December 1985 and all the staff members of the Centre actively participated in the organization of the Conference.

5. Shri D.M. Brahmbhatt has been awarded Prof. V.S. Vyas prize for the study on Production and Marketing of Mangoes in Gujarat.
6. Prof. Michael Lipton, University of Sussex, London, visited the Centre on 21-2-1986 in order to acquaint himself with the research work done in the Centre during the period 1977 to 1986. He had a meeting with the senior staff members of the Centre. Shri R. M. Patel, Deputy Director briefed Prof. Lipton about the on-going projects and some of the projects recently completed.

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## **WORK DONE DURING THE YEAR 1986-87**

This report provides a brief review of work done in the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar, during the year ending 31<sup>st</sup> March, 1987.

### **I. Project Reports Completed**

1. Cost of Milk Production in Gujarat (A Case Study of Mehsana District) by Late Shri R.D. Sevak.
2. Groundnut Development Programme in Gujarat by Navin R. Shah.
3. Repayment of Minor Irrigation Loans of Land Development Bank in Gujarat (A Case Study of Dhanera Taluka of Banaskantha District) by Shri V. D. Shah.
4. Cost of Milk Production in Rajasthan (A Case Study of Bhilwara District) by Shri S.D. Purohit.
5. Interim Report on Evaluation of Action Research Programme in Mahi Kadana Command Area in Gujarat by Shri D. M. Brahmabhatt.

### **II. Problem Oriented Studies in Progress**

1. A Follow-up study of Integrated Dry Land Agricultural Development Programme in Rajkot Taluka, Gujarat.
2. Evaluation of Public Distribution System in Rajasthan.
3. Problems and Prospects of Cultivation of Pulses in Gujarat.
4. Evaluation of National Rural Employment Programme in Gujarat.
5. Evaluation of Action Research Programme in Mahi Kadana Command Area in Gujarat.
6. Constraints in Fertilizer Consumption in Gujarat.
7. Inter-District Variations in Agricultural Development in Gujarat.
8. Inter-District Variations in Agricultural Development in Rajasthan.
9. Prospects of Changing Cropping pattern in Favour of Oilseeds and Pulses in Gujarat.
10. Evaluation of Soil Conservation Programme in selected Catchments of the Dantiwada Irrigation project in Gujarat.
11. Mini-kit Programme of Wheat and Millets including propagation of New Technology in Rajasthan.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Cost of Cultivation Scheme entrusted to the Agro-Economic Research Centre since 1970 is operating in Gujarat. Since 1981-82, as per recommendations of Dr. S.R. Sen Committee, a crop complex approach has been adopted for the selection of sixty clusters. Gujarat state is divided into 8 crop zones on the basis of the important crops grown in the districts of Gujarat. Under the crop complex approach five crops namely Bajra, Groundnut, Cotton, Arhar and Onion during the three year period 1984-87. From the current year it has been decided to study Bajra, Groundnut, Cotton, Arhar and Tobacco crops for the three year period 1987-90. The required data would be collected from 600 cultivators spread over selected 60 talukas of the Gujarat state. The work of compilation of data for the year 1985-86 was completed during the year and work of compilation of data for the year 1986-87 is in progress.

### **IV. Workshop**

The Agro- Economic Research Centre organised a Regional Technical Workshop on Comprehensive Scheme for studying the cost of cultivation of principal crops for the Western Region at Vallabh Vidyanagar in September 1986. The Workshop was attended by 42 Participants - 4 from the Directorate of Economics and Statistics, Ministry of Agriculture, Government of India, 10 from Madhya Pradesh, 2 from Maharashtra and 26 from Gujarat.

### **V. Seminars and Conferences**

1. Late Shri R.D. Sevak and Shri V. D. Shah, statistical Assistant, attended a Workshop at Gujarat University, Ahmedabad, on using SPSS packages for Social Science data analysis organised by the Department of Sociology, Gujarat University, Ahmedabad during period 29<sup>th</sup> August to 4<sup>th</sup> October, 1986.
2. Dr. Mahesh Pathak and Shri D. M. Brahmbhatt, Research Officer, were invited by the water and Land Management Institute, Gandhinagar to attend the Third Workshop on Water Management held at Anand on the 16<sup>th</sup> and 17<sup>th</sup> November 1986. Shri D. M. Brahmbhatt presented in this workshop the interim report on Socio-Economic Profile of Action Research Programme in Mahi Kadana irrigation Project.
3. Dr. Mahesh Pathak, Shri R. M. Patel, Shri N.R. Shah, Shri M.T. Bapat, Shri V.C. Patel and Shri S.D. Purohit attended the 46<sup>th</sup> All-India Agricultural Economic Conference held at Udaipur from 27<sup>th</sup> to 29<sup>th</sup> December 1986.

4. Late Shri R.D. Sevak, Shri V. D. Shah and Shri S.D. Purohit attended the 17<sup>th</sup> Gujarat Economic Conference held at Bharuch on the 15<sup>th</sup> and 16<sup>th</sup> November 1986.

## **VI. Lectures**

Under the joint auspices of the Department of Economics, Agro-Economic Research Centre and the Indian Institute of Public Administration (Local Branch) the following lectures were arranged.

1. Dr. G.R. Saini, Economic and Statistical Adviser, Directorate of Economics and Statistics, Ministry of Agriculture, Government of India, New Delhi, visited the Centre on 26-7-86 and delivered a talk on Monitoring and Evaluation of Rural Development Programme in India.
2. Shri M.D. Desai, Senior Economist, State Bank of India, Bombay, visited the Centre on 5-8-1986 and gave a talk on Concurrent Evaluation of Rural Development Programmes.
3. Shri D.T. Buch, Director, Water and Land Management Institute (WALMI), Gandhinagar, delivered a talk on Action Research Programme in Mahi Kadana Action Research Project on 9-8-1986.
4. Shri Anil C. Shah, Chief Executive, Aga Khan Rural Support Programme (India), Ahmedabad, visited the Centre on 22<sup>nd</sup> December 1986 and delivered a talk on Some Aspects of Rural Development.
5. Shri Ramu Pandit, an eminent economist, delivered a talk on Current Economic Scene on the 3<sup>rd</sup> February 1987.

## **VII. Visitors**

1. Giorgio Cingolani, Agricultural Economist, Member, Delegation of Commission of the European Communities of the South Asia visited the Centre on 20-8-1986 in order to discuss the results of the study on cost of milk production in Gujarat undertaken by this Centre.
2. Our Ex. Vice-Chancellor, Shri R.M. Patel visited the Centre on 19-9-1986 in order to acquaint himself with the research work done in the Centre during the period 1984-1986. Shri K. M. Choudhary, Deputy Director, briefed him about the on -going projects and some of the projects recently completed.
3. Dr. I. Craig Henderson of Dana-Farber Cancer Institute, Boston, U.S.A. visited the Centre on the 31<sup>st</sup> December 1986 and met the staff members of the Centre and gave his impressions about the Dingri village which he recently visited after 20 years. He was associated with the socio-economic survey of the village conducted by the Centre before 20 years.

## **VIII. Other Activities**

1. Dr. Mahesh Pathak, Hon. Director, has been invited on the following Expert Committees constituted by the Government of Gujarat:
    - (i) Member of the High Level Committee on Development of Coastal Saline Areas in Gujarat.
    - (ii) Member of Narmada Planning Group constituted by the Government of Gujarat for comprehensive and systematic planning for the Narmada Project.
    - (iii) Member of the Panel on Financial Resources constituted under the Chairmanship of Minister of Finance and Planning, Government of Gujarat.
  2. Shri R. M. Patel, Deputy Director, has been nominated by Gujarat Agricultural University as: (i) Member of the sub-committee of Research Council of Agricultural Economics, Statistics and Extension Education. (ii) Member of the Special Committee for examining research proposals of Gujarat Agricultural University and (iii) Nominated as Honorary Advisor for Agricultural Economics in Aureville (an International town), Shri Aurbindo Society, Pondicherry.
  3. Shri M.T. Bapat and Shri S.D. Purohit's article on Working of Small farmers Development Agency in States of Gujarat and Rajasthan (case studied of two districts) was published in the January-December 1985 issue of Artha-Vikas.
  4. Shri R. Indu, Officer, Machine tabulation Unit was invited by the Indian Institute of Management, Ahmedabad to work as Project Associate in their project on Management Information Systems in Handloom Industries of India. He was acquired skills for using micro computers in a decentralized industry- handlooms. He was granted leave without pay from the 16<sup>th</sup> January to 15<sup>th</sup> November 1986 for this assignment.
  5. Shri R. Indu (jointly with Dr. D. Bagchi) published an article on Marxian Economics- A retreat in the October-November 1985 issue of Social Change published from New Delhi. He also published a book review on Rural Development (written by Katar Singh) in the April-June 1987 issue of Vikalpa a house journal of IIM, Ahmedabad.
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## **WORK DONE DURING THE YEAR 1987-88**

This report provides a brief review of work done in the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar, during the year ending 31<sup>st</sup> March, 1988.

### **I. Project Reports Completed**

1. Intensive Pulse development Programme in Gujarat. (Case Studies of Panchmahals and Bharuch Districts) by Shri M.T. Bapat.
2. Price Support Operation for Mustard Seed by NAFED in Rajasthan by Shri Rajnarayan Indu.
3. National Rural Employment Programme in Gujarat (A Case Study of Kheda District) by Shri D. M. Brahmabhatt, Shri V.M. Patel and Shri V.J. Dave.
4. Evaluation of Catchment Area Development Programme (A case Study of Dantiwada catchment in Gujarat) by Shri Navin R. Shah.
5. Some Reflections of Integrated Dry Land Agricultural Development (A case Study of Rajkot Taluka, Gujarat) by Shri R.M. Patel.

### **II. Problem Oriented Studies in Progress**

1. Evaluation of Public Distribution System in Rajasthan.
2. Evaluation of Action Research Programme in Mahi Kadana Command Area in Gujarat.
3. Constraints in Fertilizer Consumption in Gujarat.
4. Inter- District Variations in Agricultural Development in Gujarat.
5. Inter -District Variations in Agricultural Development in Rajasthan.
6. Prospects of Changing Cropping pattern in Favour of Oilseeds and Pulses in Gujarat.
7. Mini-kit Programme of Wheat and Millets including propagation of New Technology in Rajasthan.
8. Role of Agricultural Extension in the Management of Draught and Impact of Extension Messages on Farmers in Gujarat and Rajasthan.
9. Impact of Recent Drought on the Economic Conditions of Rural People in Gujarat and Rajasthan.
10. Agricultural Development and Distribution of Gains- An Intra- Regional and Inter- Regional Analysis.
11. Land Use Planning- An Inter-Regional Analysis.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Cost of Cultivation Scheme entrusted to the Agro-Economic Research Centre since 1970 is operating in Gujarat. Since 1981-82, as per recommendations of Dr. S.R. Sen Committee, a crop complex approach has been adopted for the selection of sixty clusters. Gujarat state is divided into 8 crop zones on the basis of the important crops grown in the districts of Gujarat. Under the crop complex approach five crops namely Bajra, Groundnut, Cotton, Arhar and Onion were covered during the three year period 1984-87. From the last year it has been decided to study Bajra, Groundnut, Cotton, Arhar and Tobacco crops for the three year period 1987-90. The required data would be collected from 600 cultivators spread over selected 60 talukas of the Gujarat state. The work of compilation of data for the year 1986-87 was completed during the year and work of compilation of data for the year 1987-88 is in progress.

Recently the Comprehensive Scheme has received two PC/xts (with printer)- Computers under FAO project no. TCP/IND/6656 on "Farm Data for Agricultural price Policy and Resources Allocation" for mechanizing data entry/validation and quickening the pace of data analysis at the headquarters at New Delhi.

### **IV. Other Activities**

1. Dr. Mahesh Pathak, Hon. Director, has been appointed as Chairman of Gujarat State Agriculture Commission constituted by the Government of Gujarat to examine some of the basic issues relating to the agriculture in Gujarat.
  - (i) Member of the High Level Committee on Development of Coastal Saline Areas in Gujarat.
  - (ii) Member of Narmada Planning Group constituted by the Government of Gujarat for comprehensive and systematic planning for the Narmada Project.
  - (iii) Member of the Panel on Financial Resources constituted under the Chairmanship of Minister of Finance and Planning, Government of Gujarat.
2. Shri R. M. Patel, Deputy Director, has been nominated by Gujarat Agricultural University as : (i) Member of the sub-committee of Research Council of Agricultural Economics, Statistics and Extension Education. (ii) Member of the



Special Committee for examining research proposals of Gujarat Agricultural University and (iii) Nominated as Honorary Advisor for Agricultural Economics in Aureville (an International town), Shri Aurbindo Society, Pondicherry.

3. Prof. V. S. Vyas prize has been jointly awarded to Shri V.D. Shah for the study on Repayment of Minor Irrigation Loans of Land Development Bank in Gujarat (A Case Study of Dhenera taluka of Banaskantha District) and to Shri R. M. Patel, Shri K. M. Choudhary, Late Shri R.D. Sevak and Shri V.D. Shah for the study on Economics of Dairy Enterprise in Gujarat.
  4. Shri S.D. Purohit's paper on Impact of Zawar Mines on Village Economy during the period between 1963 and 1974 was published in Late Shri Bhogilal Pandya Smruti Granth.
  5. Shri Navin R. Shah's paper on "Groundnut Development Programme in Gujarat was published in Artha-Vikas, Vol. XXII No.1-2. Jan.-Dec. 1986.
  6. Our Ex-Honorary Director, Dr. V. S. Vyas visited the Centre on 18-8-1987 in order to acquaint himself with the research work in the Centre. He also met the staff members of the Centre and gave his impression about the World Bank, Washington, where he is working as a senior Adviser, at present.
  7. Dr. Nilkanth Rath and Dr. Kanta Ahuja visited the Centre and met senior research workers to discuss the activities of the Centre.
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## WORK DONE DURING THE YEAR 1988-89

This report provides a brief review of work done in the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar, during the year ending 31<sup>st</sup> March, 1989.

### I. Project Reports Completed

#### *A: Agro-Economic Research Centre Studies*

1. Evaluation of Public Distribution System in Rajasthan by K.M. Choudhary.
2. Socio- Economic Profile of Action Research Programme in Mahi Kadana Irrigation Project by D. M. Brahmbhatt.
3. Fertilizer Consumption in Gujarat by V.D. Shah.
4. An Evaluation of Mini-kit Programme for Bajra in Rajasthan by S.D. Purohit.

#### *B: Planning Commission Studies*

1. Profile Report- Agro- Climatic Zone no. 13- Gujarat Plains and Hills Region by Dr. Mahesh Pathak, Dr. A.S. Patel & Dr. H.F. Patel.
2. Strategy for Agricultural Development in Gujarat during the Eighth Plan - Agro-Climatic Zone No. 13 by Dr. Mahesh Pathak.
3. Agro - Economic research Centre has also helped in Preparing and finalizing similar profile and strategy papers for Agro-Climatic Zone No. 14 - Western Dry Region - Rajasthan.

#### *C: Gujarat State Agriculture Commission Studies*

1. Terms of trade for Agriculture: A Case Study of Gujarat by Dr. M.L. Jhala.
2. Trends in the Cost of Cultivation in Gujarat by Dr. Mahesh Pathak, Dr. A.S. Patel & Dr. H. F. Patel.

### II. Problem Oriented Studies in Progress

1. Inter- District Variations in Agricultural Development in Gujarat.
2. Inter -District Variations in Agricultural Development in Rajasthan.
3. Prospects of Changing Cropping pattern in favour of Oilseeds and Pulses in Gujarat.
4. Role of Agricultural Extension in the Management of Draught and Impact of Extension Messages on Farmers in Gujarat and Rajasthan.

5. Impact of Recent Drought on the Economic Conditions of Rural People in Gujarat and Rajasthan.
6. Employment Planning in Jaisalmer and Barmer Districts of Rajasthan.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Cost of Cultivation Scheme entrusted to the Agro-Economic Research Centre since 1970 is operating in Gujarat. Since 1981-82, as per recommendations of Dr. S.R. Sen Committee, a crop complex approach has been adopted for the selection of sixty clusters. Gujarat state is divided into 8 crop zones on the basis of the important crops grown in the districts of Gujarat. Under the crop complex approach five crops namely Bajra, Groundnut, Cotton, Arhar and Onion were covered during the three year period 1984-87. From 1987-88, it has been decided to study Bajra, Groundnut, Cotton, Arhar and Tobacco crops for the three year period 1987-90. The required data would be collected from 600 cultivators spread over selected 60 talukas of the Gujarat state. The work of compilation of data for the year 1988-87 was completed during the year and work of compilation of data for the year 1988-89 is in progress. Last year, the Comprehensive Scheme has received two PC/xts (with printer)- Computers under FAO project no. TCP/IND/6656 on "Farm Data for Agricultural price Policy and Resources Allocation" for mechanizing data entry/validation and quickening the pace of data analysis at the headquarters at New Delhi. Shri A. D. Thakkar, Statistical Assistant and Shri S.Y. Mohile, Computer attended the training programme on use of Macro Computers in data entry/ validation at Krishi Bhavan, New Delhi, from July 26 to 30, 1988. A National Workshop on the Alternative Uses of Farm Cost Data was organised by the Ministry of Agriculture, Government of India at New Delhi during 24 October to 4<sup>th</sup> November, 1988. Shri A. D. Thakkar, Statistical Assistant attended the Workshop. He is imparting practical training to the staff members of the Scheme.

### **IV. Seminars and Conferences**

Under the joint auspices of the Agro-Economic Research Centre, the Department of Economics of the Sardar Patel University and the Indian Institute of Public Administration (Vallabh Vidyanagar Branch) and the Narmada Planning Group (Gandhinagar) a seminar on the Environmental Issues of the Sardar Sarovar Project was organised on the 28<sup>th</sup> October 1988. The seminar was attended by participants representing Government of Gujarat, Gujarat

Agricultural University and senior faculty members of post graduate departments and affiliated colleges of the Sardar Patel University.

Dr. Mahesh Pathak, Shri V.D. Shah, Dr. Shri D. M. Brahmbhatt and Shri Yogesh D. Brahmbhatt were invited to attend a seminar on "Irrigation development in Gujarat", sponsored by University Grants Commission at Anand Arts College on the 13<sup>th</sup> October 1988. Shri D. M. Brahmbhatt presented a paper on "Mahi Kadana Irrigation - Problems & Solutions".

Shri D. M. Brahmbhatt, Research Officer was invited to participate in the Workshop on "Ground Water Management in India" from 30-1-89 to 1-2-89, organised by the Indian Institute of Rural Management, Anand, in collaboration with the Ford Foundation.

Dr. Mahesh Pathak, Shri V.M. Patel and Shri V.J. Dave attended the 19<sup>th</sup> Gujarat Economic Conference held at Adipur (Bhuj) on the 11<sup>th</sup> and 12<sup>th</sup> February 1989.

Shri D. M. Brahmbhatt, Research Officer attended a seminar on "Alternatives Employment Approaches", held at Gandhi Labour Institute, Ahmedabad, on the 5<sup>th</sup> and 6<sup>th</sup> March, 1989.

Dr. Mahesh Pathak attended a seminar on New Agricultural Employment: Trends and Prospectus jointly organised by the Gujarat Institute of Area Planning and the Indian Society of Agricultural Economics at Ahmedabad, during March 29-31, 1989.

## **V. Lectures**

With the joint auspices of the Department of Economics, Agro-Economic Research Centre, and the Indian Institute of Public Administration (Local Branch) the following lectures were arranged:

1. Dr. M.V. Bapat, a Soil Scientist visited the Centre on the 14<sup>th</sup> October 1988 and delivered a talk on "Soils in Gujarat".
2. Dr. Daulatbhai Desai, Professor of Education, Baroda, delivered a talk on 'Secret of Success' on the 30<sup>th</sup> January 1989.
3. Dr. V.G. Restuannikov, Soviet Research Scholar visited the Centre from 9-12 March 1989 in order to acquaint himself with the research work done in the Centre. Dr. Restuannikov delivered a talk on "New Economic policy in the Soviet Union".

## **VI. Other Activities**

1. Dr. Mahesh Pathak, Hon. Director, has been appointed as Chairman of Gujarat State Agriculture Commission constituted by the GoG to examine some of the basic issues relating to the agriculture development in Gujarat.
  - (a) Executive Member of Narmada Planning Group constituted by the Government of Gujarat for comprehensive and systematic planning for the Narmada Project.

- (b) Member of the Panel on Financial Resources constituted under the Chairmanship of Minister of Finance and Planning, Government of Gujarat.
2. Dr. Mahesh Pathak has also been invited by the Planning Commission to act as a Member- Secretary of Agro - Climatic Zones of Gujarat and Rajasthan states.
  3. Dr. Mahesh Pathak was elected as a President for the 19<sup>th</sup> Gujarat Economic Conference held at Adipur (Bhuj) on the 11<sup>th</sup> and 12<sup>th</sup> February 1989. The theme of his presidential address was Environmental Planning for Sardar Sarovar Project.

His paper on the problems and solutions for the eradication of the poverty was published in the annual number of Vyapar dated the 7<sup>th</sup> November 1988.

4. Shri R. M. Patel, Deputy Director (now retired) has been nominated by Gujarat Agricultural University as: (i) Member of the sub-committee of Research Council of Agricultural Economics, Statistics and Extension Education. (ii) Member of the Special Committee for examining research proposals of Gujarat Agricultural University and (iii) Nominated as Honorary Advisor for Agricultural Economics in Aureville (an International town), Shri Aurbindo Society, Pondicherry.
5. Shri N. R. Shah, Research Officer (jointly with Dr. Bagchi, Reader in Economics, Sardar Patel University) acted as rapporteurs for the Seminar on Environmental issues of the Sardar Sarovar Project.
6. Shri R. Indu, Officer, Machine tabulation Unit published an article jointly with Prof. T. Madhavan and Prf. S.P. Seetharaman, Indian Institute of Management, Ahmedabad on "Management of Quality in Handlooms". He was acquired skills for using micro computers in a decentralized industry- handlooms. He was granted leave without pay from the 16<sup>th</sup> January to 15<sup>th</sup> November 1986 for this assignment.
7. This year, the Department of Agriculture and Co-operation and Ministry of Agriculture, Government of India, has commissioned a study on the concurrent Evaluation of National Oilseeds Development Project in Collaboration with the Agricultural Finance Corporation, New Delhi. The main job of our Centre is to collect the primary data from the beneficiary households in the oilseeds growing districts of Gujarat State for the period of two and a half years i.e. from kharif 1988 to kharif 1991.
8. Recently, the Centre has received a set of HCL Computers with printers and other accessories. The work of installation will be carried out soon.

## WORK DONE DURING THE YEAR 1989-90

This report provides a brief review of work done in the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar, during the year ending 31<sup>st</sup> March, 1990.

### I. Project Reports Completed

#### *A: Agro-Economic Research Centre Studies*

1. Prospectus of Increasing Oilseeds and pulses production in Gujarat by N.R. Shah.

#### *B: Agro- Climatic Planning Work*

1. Strategy for Agricultural Development in Gujarat during the Eighth Plan - A Supplementary Note.
2. The Centre has also helped in finalizing the programmes for Agriculture and Allied Activities for the Eighth Plan.

#### *C: Gujarat State Agriculture Commission works*

1. Second Interim report of the Commission submitted in January 1990.
2. Final Report - Under Print for submission in June 1990.

#### *D. National Oilseeds Project Work*

The department of Agriculture & Co-operation and Ministry of Agriculture, Government of India, has commissioned a study on the concurrent evaluation of National Oilseeds Development Project in Collaborations with the Agricultural Finance Consultants, New Delhi. The main job of our Centre was to collect primary data from the beneficiary households in the oilseeds growing districts of Gujarat state. The Centre has collected data from four districts during Kharif 1989-90 and for two districts during Rabi 1989-90. Finalized schedules already have been sent to the Agricultural Finance Consultants.

### II. Problem Oriented Studies in Progress

1. Inter- District Variations in Agricultural Development in Gujarat.
2. Inter -District Variations in Agricultural Development in Rajasthan.
3. Role of Agricultural Extension in the Management of Draught and Impact of Extension Messages on Farmers in Gujarat and Rajasthan.
4. Impact of Recent Drought on the Economic Conditions of Rural People in Gujarat and Rajasthan.

5. Employment Profile of Jaisalmer and Barmer Districts of Rajasthan.
6. National Watershed Development Programme in Rajasthan.
7. Agricultural Development and Distribution of Gains.
8. Land use Planning: An Inter- Regional Analysis.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Cost of Cultivation Scheme entrusted to the Agro-Economic Research Centre since 1970. Under the crop complex approach the Centre has studied five crops namely Bajra, Groundnut, Cotton, Arhar and Onion during the three year period 1984-87. It was decided to study Bajra, Groundnut, Cotton, Arhar and Tobacco crops for the three year period 1987-90. The Comprehensive Scheme will cover Cotton, Groundnut Bajra, Jowar, Wheat and Tur during the period 1990-93. The required data would be collected from 600 cultivators spread over selected 60 talukas of the Gujarat state. The work of compilation of data for the year 1988-89 was completed during the year and work of compilation of data for the year 1989-90 is in progress.

### **IV. Seminars and Conferences**

Under the joint auspices of the Agro-Economic Research Centre, the Department of Economics, the following seminars were organised:

1. A Seminar on the Problems of Fertilizers Consumption in Gujarat was held at Vallabh Vidyanagar on the 31<sup>st</sup> July 1989. Senior representatives of the Universities, research organization, fertilizer industry and Government of Gujarat participated in the Seminar. Members of the Gujarat State Agriculture Commission also participated in this Seminar.
2. A National Seminar on the Problems of Agricultural Terms of Trade & Subsidies was organised at Vallabh Vidyanagar on the 21<sup>st</sup> October 1989. Senior representatives of the Universities, research organization, Ministry of Agriculture, Government of India, Planning Commission, Bureau of Agricultural Costs and Prices, Government of India, NABARD and Government of Gujarat participated in the Seminar. Members of the Gujarat State Agriculture Commission also participated in this Seminar.
3. All the senior staff members of the Agro-Economic Research Centre and Comprehensive Scheme attended the Fertilizer Seminar and Terms of Trade Seminar at Vallabh Vidyanagar.

4. Sarvashree S.D. Purohit, H.M. Verma, V.M. Patel, V. J. Dave, J .C. Patel and R.M. Patel attended the 20<sup>th</sup> Annual Conference of the Gujarat Economic Association held at Ahmedabad on the 17<sup>th</sup> and 18<sup>th</sup> March 1990.
5. Dr. Mahesh Pathak attended a Seminar on Credit Planning organised by NABARD at Ahmedabad on the 19<sup>th</sup> January 1990.
6. Smt. Rajeshree Dutta participated in a Workshop on Land use planning Through Satellite Imageries organised by the Agro - Climatic Regional Planning Unit at Ahmedabad on the 7<sup>th</sup> February 1990.
7. Shri R. Indu participated in the final presentation of the project of 'Management Information Systems in Handlooms' at Indian Institute of Management, Ahmedabad, on the 12<sup>th</sup> January 1990. He also worked as the Project Associate in the above project.

## **V. Visitors**

1. Dr. Y.K. Alagh was invited as Chief Guest to celebrate the Anand day of the Centre on the 6<sup>th</sup> June 1989. He delivered a talk on Agro- Climatic Planning.
2. Smt. Kumud Pore from Gokhale Institute of Economics & Politics, Poona, visited the Centre for her research work in the last week of April 1989.

## **VI. Other Activities**

1. Dr. Mahesh Pathak, Hon. Director, has been nominated as Member in the Multi- Disciplinary Advisory Committee for Mahi Kadana project. He has also been nominated as a member of the Expert Committee on Food Processing Industries constituted by the Government of India in November 1989.
2. Sarvashree D.M. Brahmbhatt and N.R. Shah were awarded Prof. V. S. Vyas Prize on the 15<sup>th</sup> December 1989 for their reports which were adjudged to be the best during the last two year period ending March 1989.
3. Shri S. D. Purohit's article on " An Evaluation of Bajra Minikit Programme ( A Case Study of Jaipur District in Rajasthan) was published in Artha- Vikas, Vol. XXIV No. 1-2, January - Dec. 1988 (published in 1990)
4. Shri V.D. Shah presented a paper on Fertilizer Consumption in Gujarat in the Fertilizer Seminar organised at Vallabh Vidyanagar in July 1989.



## WORK DONE DURING THE YEAR 1990-91

This report provides a brief review of the work done in the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar during the year ending 31<sup>st</sup> March, 1991.

### I. Project Work Completed

#### *A: Agro-Economic Research Centre:*

- 1) Employment Planning in Jaisalmer and Barmer District of Rajasthan.

#### *B: Gujarat State Agriculture Commission:*

- 1) Final Report of Gujarat State Agriculture Commission submitted in June 1990.

### II. Problem Oriented Studies in Progress:

- 1) Inter-District Variations in Agricultural Development in Gujarat
- 2) Inter-District Variation in Agricultural Development in Rajasthan
- 3) National Watershed Development Programme in Rajasthan
- 4) Land Use Planning: An Inter Regional Analysis
- 5) Effect of Subsidies on Agricultural Development
- 6) Economic Viability of Marginal & Small Farms: Potentialities for Increasing Income and Employment on Marginal Farms
- 7) Emerging Problems of Agricultural Marketing with Special Focus on Agricultural Processing and Input Supplies.
- 8) Decentralized Planning for Agricultural & Rural Development-Infrastructure Development Enumeration at District Level.
- 9) Fertilizer Consumption in Rajasthan

### III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.

The Cost of Cultivation Scheme entrusted to the Agro-Economic Research Centre is operating in Gujarat since 1970. Since 1981-82 as per the recommendations of Dr. S. R. Sen Committee, a crop complex approach has been adopted for the selection of sixty clusters. Gujarat State is divided into 8 crop zones on the basis of the important crop grown in the districts of Gujarat. Under the crop-complex approach the Centre has studied five crops, namely bajra, groundnut, cotton, tur and tobacco during the three year period 1987-90. From 1990-91 it has been decided to study bajra, groundnut, cotton, tur, jowar and wheat crops for the three year

period 1990-93. The required data are collected from 600 cultivators spread 60 selected talukas of Gujarat. The work of compilation of data for the year 1989-90 was completed during the year and work of compilation of data for the year 1990-91 is in progress.

#### **IV. Seminars and Conference:**

- 1: Under the joint auspices of the Agro-Economic Research Centre and the Department of Economics a high level seminar on the Major Issues of Sardar Sarovar Project was organized at Vallabh Vidyanagar on the 7<sup>th</sup> & 8<sup>th</sup> March 1990. Staff members of the Agro Centre and the Comprehensive Scheme attended this seminar.
  - 2: Dr. Mahesh Pathak, Shree D. M. Brahmbhatt, U. R. Singh, B. A. Patel attended the 21<sup>st</sup> Annual Conference of the Gujarat Economic Association held at Vapi on the 9<sup>th</sup> & 10<sup>th</sup> February 1991.
  - 3: Mrs. Rajeshree Dutta, Shri V. D. Shah and Shri A. D. Thaker attended the 44<sup>th</sup> Annual Conference of Indian Society of Agricultural Statistics held at Anand from 28<sup>th</sup> November to 3<sup>rd</sup> December 1990.
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## **WORK DONE DURING THE YEAR 1991-92**

Work done in the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar during the year ending 31<sup>st</sup> March, 1992 is as follow:

### **I. Project Work Completed:**

1. Action Research Project – An Interim Evaluation (A Case Study of Mahi Kadana Irrigation Project), by Arun S. Patel

### **II. Problem Oriented Studies in Progress:**

1. Inter-District Variations in Agricultural Development in Gujarat
2. Inter-District Variations in Agricultural Development in Rajasthan
3. Evaluation of National Watershed Development in Rajasthan
4. Land Use Planning in Gujarat
5. Effect of Subsidies on Agricultural Development
6. Economic Viability of Marginal and Small Farms, Potentialities for Increasing Income and Employment on Marginal Farms
7. Studies on Emerging Problems of Agricultural Marketing with Special Focus on Agricultural Processing and Input Supplies
8. Decentralized Planning for Agricultural and Rural Development- Infrastructure Development Enumeration at District Level
9. Impact of Increase in Fertilizer Price in Gujarat

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Cost of Cultivation Scheme entrusted to the Agro-Economic Research Centre is operating in Gujarat since 1970. Since 1981-82, as per the recommendation of Dr. S. R. Sen Committee, a crop complex approach has been adopted for the selection of sixty clusters. Gujarat State is divided into 8 crop zones on the basis of important crops grown in the districts of Gujarat.

Under the crop complex approach, six crops namely, bajra, groundnut, cotton, tur, jowar and wheat have been selected for the three years period 1990-1993. The required data were collected from 600 cultivators spread over 60 selected talukas of Gujarat. The sample of cultivators was drawn from five size groups of holdings, viz., 0 to 1 hectare, 1-2 hectares, 2-3 hectares, 4-6 hectares and 6 hectares and below. The cultivators were selected from each cluster.

Thus, the total size of the sample was of 600 cultivators. The compiled data of the year 1990-91 have been sent to the Directorate of Economics and Statistics, Government of India, New Delhi.

In the third week of February 1992, Shri H. S. Rastogi, Deputy Economic & Statistical Adviser (Cost) and Shri H. L. Aggarwal, Section Officer, Directorate of Economics and Statistics, Ministry of Agriculture, Krishi Bhavan, New Delhi, visited the centre. They also visited the Dhandhuka cluster and observed the process of data collection for the scheme. They also held discussions with the headquarters staff of the scheme in order to know the procedure for compilation of data and the problems related to it. Shri K. M. Choudhary, Deputy Director and Office-In-Charge of the scheme and Shri. J. C. Patel, Statistical Assistant attended the meeting held on the 3<sup>rd</sup> and 4<sup>th</sup> March, 1992 in Krishi Bhavan, New Delhi to discuss Performa for collection of primary data to be introduced from the next season.

#### **IV. Seminars and Conferences:**

1. A national seminar on Drip Irrigation was jointly organized by the IPCL, Planning Commission, Sardar Sarovar Nigam & Agro-Economic Research Centre during November, 1991 at Baroda.
2. A symposium on Union Budget was jointly organized by the Department of Economics and the Agro-Economic Research Centre, on the 23<sup>rd</sup> August, 1991 at the Sardar Patel University, Vallabh Vidyanagar.
3. Shri S. D. Purohit attended the 51<sup>st</sup> Annual Conference of Indian Society of Agricultural Economics, held during 18<sup>th</sup> to 20<sup>th</sup> December 1991 at Hyderabad.
4. Dr. Mahesh Pathak, Honorary Director, attended a two- day seminar on Sardar Sarovar as a Development Project (NARMADA ABHIYAN) held on the 31<sup>st</sup> August and 1<sup>st</sup> September, 1991 at Ahmedabad.
5. Dr. Pathak also attended a seminar on Agricultural Policies held at Ahmedabad on the 22-23 June 1991 and presented a paper jointly prepared with Dr. A. S. Patel & Dr. M. L. Jhala.
6. Shri D. M. Brahmabhatt and Dr. Mahesh Pathak attended a seminar on Drip Irrigation System in Gujarat, held at the IPCL Complex, Baroda on the 28<sup>th</sup> November, 1991.
7. Shri N. R. Shah and Smt. R. A. Dutta attended a seminar on Introduction of Green Revolution in Dry Farming Areas in Gujarat, held at Ahmedabad on the 6<sup>th</sup> February 1992.
8. The AERC organized an intensive 6 week computer training programme for its staff members during May, 1991. Shri R. Indu, Shri V. D. Shah, Dr. H. F. Patel, Shri J. C. Patel, Smt. Vilas R. Indu, Miss. A. B. Amodara and Shri J. B. Kahar attended this training programme.

## **WORK DONE DURING THE YEAR 1992-93**

Work done in the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar during the year ending 31<sup>st</sup> March, 1993.

### **I. Project Work Completed**

1. Transportation of Agricultural Products in Gujarat
2. Some Aspects of Land Use Planning in Gujarat

### **II. Problem Oriented Studies in Progress:**

- 1) Inter-District Variations in Agricultural Development in Gujarat
- 2) Inter-District Variation in Agricultural Development in Rajasthan
- 3) Evaluation of National Watershed Development Programme in Rajasthan
- 4) Economic Viability of Marginal & Small Farms: Potentialities for Increasing Income and Employment on Marginal Farms
- 5) Decentralized Planning for Agricultural & Rural Development-Infrastructure Development Enumeration at District Level.
- 6) Studies on Emerging Problems of Agricultural Marketing with Special Focus on Agricultural Processing and Input Supplies
- 7) Impact of Increase in Fertilizer Prices in Gujarat

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Cost of Cultivation Scheme entrusted to the Agro-Economic Research Centre is operating in Gujarat since 1970. Since 1981-82 as per the recommendations of Dr. S. R. Sen Committee, a crop complex approach has been adopted for the selection of sixty clusters. Gujarat State is divided into 8 crop zones on the basis of the important crop grown in the districts of Gujarat. Under the crop-complex approach six crops, namely bajra, groundnut, cotton, tur, jowar and wheat have been selected for the block period 1990-93. The required data were collected from 600 cultivators spread over 60 selected talukas of Gujarat. The sample was drawn from five size group of holdings, viz., 0 to 1 hectare, 1-2 hectares, 2-3 hectares, 4-6 hectares and 6 hectares and above. The total size of the sample, thus works out to 600. The completed data of the first 10 cluster for the year 1991-92 have been dispatched to the DES, Government of India, New Delhi, the remaining 50 clusters will be sent shortly.

A new system of the data collection and processing have been developed as per requirement of FARAMP structure, developed under the FAO TCP project "Policy Analysis Using Farm Level Data". Sarvashree V. C. Patel, Research Officer, J. C. Patel, Statistical Assistant, R. M. Patel, M. S. Jaiswal, U. R. Singh, A. M. Patel and B. A. Patel all agricultural supervisors, were deputed for training during January, 1993 at New Delhi in the collection of data in new questionnaire.

However, all the computers, Sarvashree S. Y. Mohile, R. N. Padhiyar, G. A. Inamadar, P. D. Naik, D. R. Patel, C. P. Patel, S. B. Darji and Mrs. D. B. Parmar dealing with tabulation and compilation of data also received training in data entry and validation organize at New Delhi during January, 1993.

Dr. G. S. Ram, Economic & Statistical Adviser, Directorate of Economics & Statistics, Government of India, and New Delhi was in Vallabh Vidyanagar for attending the Governing Body meeting of the Agro-Economic Research Centre on the 14<sup>th</sup> August, 1992. Despite his busy schedule, he spread time to meet the colleagues in the Scheme, observed data processing work at the computer unit as also visited selected villages with a view to getting first hand information about the collection of data.

#### **IV. Seminars and Conference:**

A seminar on Sardar Sarovar Project was jointly organized by the Agro-Economic Research Centre and Department of Economics on the 20<sup>th</sup> August, 1992.

#### **V. Other Activities:**

1. A paper on Evaluation of Catchment Area Development Programme (A Case Study of Dantiwada Catchment in Gujarat) N. R. Shah was published in Artha-Vikas, Journal of Economics Development, Vallabh Vidyanagar, 1990.
2. Shri Rajnarayan Indu, Office (Computer Unit) has been awarded the Ph. D Degree in Economics for his thesis entitled "Problems and Prospects of a Decentralized Industry - A Case Study of Handlooms in India", by the Gujarat University, Ahmedabad, on the 21<sup>st</sup> November, 1992.
3. Shri Rajnarayan Indu attended an International Symposium on Management of Rural Co-operatives, organized by Institute for Rural Management, Anand, (IRMA), during December 7 to 11, 1992. He also submitted a paper on "Equity in Employment for Weavers: Some Heuristics for Order Allocation in the Co-operative Handloom Industry".

## **WORK DONE DURING THE YEAR 1993-94**

Work done in the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar during the year ending 31<sup>st</sup> March, 1994 is as under:

### **I. Project Work Completed**

1. Some Aspects of Land Use Planning in Gujarat
2. Impact of Fertilizer Price Hike on Gujarat Agriculture
3. Evaluation of Watershed Development Programme (A Study of Two Districts in Rajasthan)
4. Inter-District Variations in Agricultural Development in Rajasthan

### **II. Problem Oriented Studies in Progress:**

- 1) Economic Viability of Marginal & Small Farms: Potentialities for Increasing Income and Employment on Marginal Farms
- 2) Inter-District Variations in Agricultural Development in Gujarat
- 3) Decentralized Planning for Agricultural & Rural Development-Infrastructure Development Enumeration at District Level.
- 4) Studies on Emerging Problems of Agricultural Marketing with Special Focus on Agricultural Processing and Input Supplies

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre is operating in Gujarat since 1970. Since 1983, on the recommendations of the Expert Committee headed by Dr. S. R. Sen the single crop approach has been replaced by crop complex approach under which the number of cluster have been increased 60 from 40, thereby providing a wider and varied base for data generation. Gujarat State is divided into 8 crop zones on the basis of the important crop grown in the districts of Gujarat. Under the crop-complex approach eight crops, namely bajra, groundnut, cotton, tur, wheat, sugarcane and mustard are being studied continuously and simultaneously for three consecutive years in the same cluster of village for the block period 1993-96. At present, there is sample of 600 cultivators, drawn from different size group of holdings. The five size groups are below 1 hectare, 1-2 hectares, 2-3 hectares, 4-6 hectares and 6 hectares and above. The completed data for the entire first 60 cluster for the year 1991-92 have been

provided to the Directorate of Economics & Statistics, Government of India and New Delhi.

Shri M. P. Singh, Deputy Economic & Statistical Adviser, Directorate of Economics & Statistics, Ministry of Agriculture, Government of India, New Delhi, was in Vallabh Vidyanagar for attending the Governing Body meeting of the Agro-Economic Research Centre on 1<sup>st</sup> November, 1993.

Shri H. F. Patel, Hon. Jt. Director, Shri J. C. Patel, Statistical Assistant and Sarvashree R. M. Patel and M. S. Jaiswal, both Agricultural Supervisors, attended the National Workshop of various implementing agencies working for the Cost of Cultivation Scheme on 28<sup>th</sup> & 29<sup>th</sup> October 1993 at New Delhi. Shri M. D. Desai, Honorary Adviser and Dr. H. F. Patel, Hon. Jt. Director attended the Officers-in-charge meeting of all the Agro-Economic Research Centre/Units held on 24<sup>th</sup> & 25<sup>th</sup> March, 1994 at New Delhi. Shri V. D. Shah, Statistical Assistant, was in New Delhi on 6<sup>th</sup> December 1993 for receiving the cash award and certificate for the article, "Impact of Fertilizer Price Hike on Gujarat Agriculture". The award and certificate was presented by Shri N. Krishnan, Fertilizer Secretary, Ministry of Fertilizer, Government of India, New Delhi in a special function organized at Hotel Ashok.

#### **IV. Seminars and Conference:**

An article on Impact of Fertilizer Price Hike on Gujarat Agriculture, Dr. Mahesh Pathak, Shri V. D. Shah and Dr. M. L. Jhala was published in Fertilizer News of the Fertilizer Association of India, New Delhi August, 1993.

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## **WORK DONE DURING THE YEAR 1994-95**

Work done in the Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar during the year ending 31<sup>st</sup> March, 1995 is as under:

### **I. Project Work Completed**

1. Economic Viability of Marginal & Small Farms in Rainfed Agriculture (A Study of Bhavnagar District in Gujarat)
2. Economic Viability of Marginal & Small Farms in Irrigated Agriculture (A Study of Panchmahals District in Gujarat)
3. Inter-District Variations in Agricultural Development in Gujarat 1949-50 to 1991-92

### **II. Problem Oriented Studies in Progress:**

- 1) Studies on Emerging Problems of Agricultural with Special Focus on Agricultural Processing and Input Supplies
- 2) Decentralized Planning for Agricultural & Rural Development-Infrastructure Development Enumeration at District Level.
- 3) Effect of Subsidies in Agricultural Development
- 4) Impact of Recovery Performance and Credit Disbursing Institutions and Flow of Agricultural Credit Problems faced by Borrowers in the Formal Credit Sector for Repayment of Loan
- 5) Evaluation of Engineering Structures under Soil Conservation Schemes
- 6) Agro-Economic Impact of Soil Conservation Measures in Minor Watersheds under NWDPR

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre is operating in Gujarat since 1970. Since 1983, on the recommendations of the Expert Committee headed by Dr. S. R. Sen the single crop approach has been replaced by crop complex approach under which the number of cluster have been increased 60 from 40, thereby providing a wider and varied base for data generation. Gujarat State is divided into 8 crop zones on the basis of the important crop grown in the districts of Gujarat. Under the crop-complex approach eight crops, namely bajra, groundnut, cotton, tur, wheat, sugarcane and mustard are being studied continuously and simultaneously for three consecutive year in the same cluster of village for the block period 1993-96. At present,

there is sample of 600 cultivators, drawn from different size group of holdings. The five size groups are below 1 hectare, 1-2 hectares, 2-3 hectares, 4-6 hectares and 6 hectares and above. The completed data for all first 60 clusters for the year 1992-93 have been provided to the Directorate of Economics and Statistics, Government of India, New Delhi.

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## **WORK DONE DURING THE YEAR 1995-96**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 1996, is as under:-

### **I. Project Work Completed**

1. Recovery Performance of Institutional Farm Credit in Rajasthan (An In-depth Study in Bharatpur District) by D.M. Brahmbhatt and V.J. Dave, September 1995.
2. Emerging Problems of Agricultural Marketing (A Case Study of Tomato in Gujarat), by V. M. Patel, November, 1995.
3. Impact of Subsidies on Agricultural Development in Gujarat, by R. A. Dutta, 1995.
4. Emerging Problems of Agricultural Marketing (A Case Study of Mustard in Gujarat), by N.R. Shah, December, 1995.
5. Evaluation of Engineering Structures under Soil Conservation Scheme (A Case Study of Chambal RVP and Sahibi FPR in Rajasthan), by S.D. Purohit and H.M. Verma, November, 1995.
6. Emerging Problems of Agricultural Marketing (A Case Study of Mustard in Gujarat), by N.R. Shah, December, 1995.

### **II. Problem-Oriented Studies in Progress:**

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### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. Since 1983, on the recommendation of the Expert Committee headed by Dr. S.R. Sen, the single crop approach has been replaced by crop complex approach under which the number of clusters have been increased to 60 from 40, thereby providing a wider and varied base for data generation. Gujarat State is divided into 8 crop zones on the basis of important crops grown in the districts of Gujarat. Under the crop complex approach eight crops, namely, bajra, groundnut, cotton, arhar, jowar, wheat, sugarcane and mustard are being studied continuously and simultaneously for three consecutive years in the

same cluster of villages for the block period 1993-1996. At present, there is a sample of 600 cultivators, drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0 to 2.0 hectares, 2.0 to 4.0 hectares, 4.0 to 5.0 hectares and 6.0 hectares and above. The compiled data for all the 60 clusters for the year 1993-94 have been provided to the Directorate of Economics & Statistics, Government of India, New Delhi. Coding work of crops, data entry into the computer, including its validation is over in case of all the 60 clusters for the year 1993-94 (i.e. CF.1.1, 1.2, 3.1, 4.1, 4.2 and 5.0) have been provided to the Directorate of Economics & Statistics, Government of India, New Delhi.

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## **WORK DONE DURING THE YEAR 1996-97**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 1997, is as under:-

### **I. Project Work Completed :**

1. Decentralized Planning in Agriculture and Rural Development (A Case Study of Bharuch district in Gujarat), by D.M. Brahmbhatt, May, 1996.
2. Emerging Problems of Agricultural Marketing (A Case Study of Banana in Gujarat), by V.M. Patel, September, 1996.
3. Evaluation of Engineering Structures under Soil Conservation Scheme (A consolidated report of AERC Studies), by S.D. Purohit, August, 1996.
4. Impact of National Watershed Development Project for Rainfed Areas (NWDPA) in Gujarat, by V. D. Shah and V.G. Patel, December, 1996.
5. Analysis of Trends in Operational Holdings in Gujarat, by Rajeshree A. Dutta, March, 1997.
6. Analysis of Trends in Operational Holdings in Rajasthan, by Rajeshree A. Dutta and H.M. Verma, March, 1997.

### **II. Problem-Oriented Studies in Progress:**

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### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. Since 1983, on the recommendation of the Expert Committee headed by Dr. S.R. Sen, the single crop approach has been replaced by crop complex approach under which the number of clusters have been increased to 60 from 40, thereby providing a wider and varied base for data generation. Gujarat State is divided into 8 crop zones on the basis of important crops grown in the districts of Gujarat. Under the crop complex approach eight crops, namely, bajra, groundnut, cotton, arhar, jowar, wheat, sugarcane and mustard were studied

continuously and simultaneously for three consecutive years in the same cluster of villages for the block period 1993-1996. For the block period 1996-99, seven crops namely, bajra, groundnut, cotton, arhar, wheat, sesamum and mustard were selected to study continuously and simultaneously for next three consecutive years in the same cluster of villages for the block period 1996-99. At present, there is a sample of 600 cultivators, drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0 to 2.0 hectares, 2.0 to 4.0 hectares, 4.0 to 5.0 hectares and 6.0 hectares and above. The compiled data for all the 60 clusters for the year 1994-95 have been provided to the Directorate of Economics & Statistics, Government of India, New Delhi.

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## **WORK DONE DURING THE YEAR 1997-98**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31<sup>st</sup> March, 1998, is as under:-

### **I. Project Work Completed :**

1. Evaluation of Fish Farmers' Development Agencies in Gujarat (A Study in Valsad, Panchmahals and Rajkot districts), by V.J. Dave, September, 1997.

### **II. Problem-Oriented Studies in Progress:**

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### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. Since 1983, on the recommendation of the Expert Committee headed by Dr. S.R. Sen, the single crop approach has been replaced by crop complex approach under which the number of clusters have been increased to 60 from 40, thereby providing a wider and varied base for data generation. Gujarat State is divided into 8 crop zones on the basis of important crops grown in the districts of Gujarat. Under the crop complex approach eight crops, namely, bajra, groundnut, cotton, arhar, jowar, wheat, sugarcane and mustard were studied continuously and simultaneously for three consecutive years in the same cluster of villages for the block period 1993-1996. For the block period 1996-99, seven crops namely, bajra, groundnut, cotton, arhar, wheat, sesamum and mustard were selected to study continuously and simultaneously for next three consecutive years in the same cluster of villages for the block period 1996-99. At present, there is a sample of 600 cultivators, drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0 to 2.0 hectares, 2.0 to 4.0 hectares, 4.0 to 5.0 hectares and 6.0 hectares and above. The compiled data for all the 60 clusters for the year 1995-96 have been provided to the Directorate of Economics & Statistics, Government of India, New Delhi.

## WORK DONE DURING THE YEAR 1998-99

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 1999, is as under:-

### I. Project Work Completed:

1. Economics of Export oriented Horticulture Crop Chiku (Sapota) in Gujarat (A Case Study in Valsad district), by V. J. Dave, July, 1998.
2. Oilseeds Development Perspective under Liberalized Economy, by Rajeshree A. Dutta and H.M. Verma, July, 1998.
3. Production and Utilization Pattern of Milk at the Rural Producer's Level in Gujarat, by V. D. Shah, October, 1998.

### II. Problem-Oriented Studies in Progress:

1. Impact of Change in Fertilizer Prices on Fertilizer Consumption Special focus on Farmers without any marketable surplus in Rajasthan.
2. Promotion of Oilseed Crops in Non-Traditional Areas (Consolidation)
3. Production & Utilization pattern of Milk at the Rural Milk Producers level (Gujarat).
4. Economic of Pulses Production and Identification of Constraints in raising their Production (Rajasthan).
5. Economic of Pulses Production and Identification of Constraints in raising their Production (Gujarat).
6. Role of Cooperative Credits for the Development of different size group of Farmers in Gujarat.
7. Role of Cooperative Credits for the Development of different size group of farmers (Coordination & Consolidation of Gujarat, Haryana and Andhra Pradesh study report).
8. Evaluation of Management of Seed Supply in Oilseeds and Pulses in Rajasthan.
9. Evaluation of Management of Seed Supply in Oilseeds and Pulses in Gujarat.



### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. Since 1983, on the recommendation of the Expert Committee headed by Dr. S.R. Sen, the single crop approach has been replaced by crop complex approach under which the number of clusters have been increased to 60 from 40, thereby providing a wider and varied base for data generation. Gujarat State is divided into 8 crop zones on the basis of important crops grown in the districts of Gujarat. For the block period 1996-99, seven crops namely, bajra, groundnut, cotton, arhar, wheat, sesamum and mustard were selected to study continuously and simultaneously for next three consecutive years in the same cluster of villages. At present, there is a sample of 600 cultivators, drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0 to 2.0 hectares, 2.0 to 4.0 hectares, 4.0 to 5.0 hectares and 6.0 hectares and above. The compiled data for all the 60 clusters for the year 1996-97 have been provided to the Directorate of Economics & Statistics, Government of India, New Delhi.

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## **WORK DONE DURING THE YEAR 1999-2000**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31<sup>st</sup> March, 2000, is as under:-

### **I. Project Work Completed:**

1. Economics of Pulses Production and Identification of Constraints in Raising their Production in Rajasthan, by H. M. Verma, October, 1999.
2. Economics of Pulses Production and Identification of Constraints in Raising their Production in Gujarat, by V. G. Patel, February, 2000.
3. Role of Co-operative Credit in the Development of Different Size Group of Farmers in Gujarat (A Case Study in Rajkot district), by V.J. Dave, February, 2000.

### **II. Problem-Oriented Studies in Progress:**

1. Promotion of Oilseeds Crops in Non-Traditional Areas Consolidated Report.
2. Role of Cooperative Credits for the Development of different size group of farmers Consolidated Report of Gujarat, Haryana & Andhra Pradesh.
3. Evaluation of Management of Seed Supply in Oilseeds and Pulses in Rajasthan.
4. Evaluation of Management of Seed Supply in Oilseeds and Pulses in Gujarat.
5. Impact of MSP on the Agriculture Economy of Gujarat.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. Since 1983, on the recommendation of the Expert Committee headed by Dr. S.R. Sen, the single crop approach has been replaced by crop complex approach under which the number of clusters have been increased

to 60 from 40, thereby providing a wider and varied base for data generation. Gujarat State is divided into 8 crop zones on the basis of important crops grown in the districts of Gujarat. Under the crop complex approach eight crops, namely, bajra, groundnut, cotton, arhar, jowar, wheat, sugarcane and mustard were studied continuously and simultaneously for three consecutive years in the same cluster of villages for the block period 1993-1996. For the block period 1996-99, seven crops namely, bajra, groundnut, cotton, arhar, wheat, sesamum and mustard were selected to study continuously and simultaneously for next three consecutive years in the same cluster of villages for the block period 1996-99. For the block 1999-2002, same seven crops are selected. At present, there is a sample of 600 cultivators, drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0 to 2.0 hectares, 2.0 to 4.0 hectares, 4.0 to 5.0 hectares and 6.0 hectares and above. The compiled data for all the 60 clusters for the year 1997-98 have been provided to the Directorate of Economics & Statistics, Government of India, New Delhi.

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## **WORK DONE DURING THE YEAR 2000-2001**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 2001, is as under:-

### **I. Project Work Completed:**

1. Impact of National Watershed Development Project for Rainfed Areas (NWDPA) (A Rapid Assessment), by V.D. Shah, December, 2000.
2. Evaluation of Management of Seed Supply in Oilseeds and Pulses in Gujarat, by Rajeshree A. Dutta, H.M. Verma and C.F. Patel, December, 2000.

### **II. Problem-Oriented Studies in Progress:**

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### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. Since 1983, on the recommendation of the Expert Committee headed by Dr. S.R. Sen, the single crop approach has been replaced by crop complex approach under which the number of clusters have been increased to 60 from 40, thereby providing a wider and varied base for data generation. Gujarat State is divided into 8 crop zones on the basis of important crops grown in the districts of Gujarat. Under the crop complex approach seven crops, namely, bajra, groundnut, cotton, arhar, wheat, sesamum and mustard are being studied continuously and simultaneously for three consecutive years in the same cluster of villages for the block period 1999-2002. At present, there is a sample of 600 cultivators, drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0 to 2.0 hectares, 2.0 to 4.0 hectares, 4.0 to 5.0 hectares and 6.0 hectares and above. The compiled data for all the 60 clusters for the year 1998-99 have been provided to the Directorate of Economics & Statistics, Government of India, New Delhi.

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## **WORK DONE DURING THE YEAR 2001-02**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31<sup>st</sup> March, 2002, is as under:-

### **I. Project Work Completed:**

1. Evaluation of Management of Seed Supply in Oilseeds and Pulses in Rajasthan, by V.D. Shah, April, 2001.
2. Likely Impact of Liberalized Imports and Low Tariff on Edible Oil Sector in Rajasthan, by Rajeshree A. Dutta and H.M. Verma, July, 2001.
3. Evaluation of Fish Farmers' Development Agencies (FFDA) in Rajasthan, by Dilip Bagchi and H. M. Verma, August, 2001.
4. Assessing the Existing Training and Testing Facilities of Farm Machinery in Gujarat, by Mahesh Pathak, H.F. Patel and V.D. Shah, October, 2001.
5. Flow of Credit to Small and Marginal Farmers in Gujarat, by Shri V. J. Dave and Shri Dilip Chauhan, January, 2002.

### **II. Problem-Oriented Studies in Progress:**

1. Review of State Agriculture Policy in Gujarat - Part - I (Allotted- 2002 and Final Proposal- Aug. 2002).
2. Review of State Agriculture Policy in Gujarat - Post-WTO Scenario - Part-II.
3. Review of State Agriculture Policy in Rajasthan - Part I
4. Review of State Agriculture Policy in Rajasthan - Part II
5. Promotion of Oilseeds Crops in Non-traditional Area: consolidated report.
6. Role of Co-operative credit for the Development of Different Size Groups of Farmers: Consolidated report.
7. Study on Impact of Minimum Support Price in Gujarat.
8. Flow of Credit to Small and Marginal Farmers in Gujarat.

9. Assessing the Existing Training and Testing Facilities of Farm Machinery in Rajasthan.
10. Evaluation of National Oilseeds and Vegetable Oils Development (NOVOD) Board sponsored Development Programmes for Promotion of Oilseed crops in Non-traditional Areas: Consolidated Report.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. Since 1983, on the recommendation of the Expert Committee headed by Dr. S.R. Sen, the single crop approach has been replaced by crop complex approach under which the number of clusters have been increased to 60 from 40, thereby providing a wider and varied base for data generation. Gujarat State is divided into 8 crop zones on the basis of important crops grown in the districts of Gujarat. Under the crop complex approach seven crops, namely, bajra, groundnut, cotton, arhar, wheat, sesamum and mustard are being studied continuously and simultaneously for three consecutive years in the same cluster of villages for the block period 1999-2002. At present, there is a sample of 600 cultivators, drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0 to 2.0 hectares, 2.0 to 4.0 hectares, 4.0 to 5.0 hectares and 6.0 hectares and above. The compiled data for all the 60 clusters for the year 1999-2000 have been provided to the Directorate of Economics & Statistics, Government of India, New Delhi.

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## **WORK DONE DURING THE YEAR 2002-03**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 2003, is as under:-

### **I. Project Work Completed:**

1. Role of Co-operative Credit in the Development of Different Size Groups of Farmers (A Consolidated Study), by V. J. Dave, June, 2002.
2. Assessing the Existing Training and Testing Facilities of Farm Machinery in Rajasthan, by H. M. Verma, April, 2002.
3. Evaluation of National Oilseeds and Vegetable Oils Development (NOVOD) Board sponsored Development Programmes for Promotion of Oilseed crops in Non-traditional Areas: Consolidated Report, by Rajeshree. A. Dutta, January, 2003.

### **II: Problem-Oriented Studies in Progress:**

1. Review of State Agriculture Policy in Rajasthan (Part I and II).
2. Impact of Minimum Support Prices on Agriculture Economy of Gujarat.
3. Rural Non-Farm Employment in Gujarat.
4. Rural Non-Farm Employment in Rajasthan.
5. Water Use Practices, Management and Marketing in Rajasthan.
6. Building Up of an Efficient Marketing System to Obviate the Need for Large-scale State Intervention in Gujarat.
7. Building Up of an Efficient Marketing System to Obviate the Need for Large-scale State Intervention in Gujarat.
8. Building Up of an Efficient Marketing System to Obviate the Need for Large-scale State Intervention in Rajasthan.
9. Co-operative Marketing Societies: Success & Failure in Gujarat; Co-coordinator.
10. Review of State Agriculture Policy in Gujarat.

11. Flow of Credit to Small and Marginal Farmers in Gujarat & Rajasthan -  
(A Common Study) Proposed by Credit Division of DAC.
12. Likely Impact of Liberalized Imports and Low Tariff on Edible Oils Sector in Gujarat - (A Common Study) Proposed by TMOP).

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. Since 1983, on the recommendation of the Expert Committee headed by Dr. S.R. Sen, the single crop approach has been replaced by crop complex approach under which the number of clusters have been increased to 60 from 40, thereby providing a wider and varied base for data generation. Gujarat State is divided into 8 crop zones on the basis of important crops grown in the districts of Gujarat. Under the crop complex approach ten crops, namely bajra, groundnut, cotton, tur, wheat, sesamum, mustard and onion are being studied continuously and simultaneously for three consecutive years in the same cluster of villages for the block period 2002-2005. At present, there is a sample of 600 cultivators, drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0 to 2.0 hectares, 2.0 to 4.0 hectares, 4.0 to 5.0 hectares and 6.0 hectares and above. The compiled data for all the 60 clusters for the year 2000-2001 have been provided to the Directorate of Economics & Statistics, Government of India, New Delhi.

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## **WORK DONE DURING THE YEAR 2003-04**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 2004, is as under:-

### **I. Project Work Completed:**

1. Impact of Minimum Support Prices on Agriculture Economy of Gujarat, by V. D. Shah and H. F. Patel, August, 2003.
2. Rural Non-Farm Employment in Gujarat, by Rajeshree A. Dutta and S. R. Bhaiya, March, 2004.

### **II. Problem-Oriented Studies in Progress:**

1. Co-operative Marketing Societies: Reasons for Success and Failures in Gujarat.
2. Building Up of an Efficient Marketing System to Obviate the Need for Large-scale State Intervention in Gujarat.
3. Agro-Economic Research for Agriculture Policy (Gujarat and Rajasthan Experience: 1980-2004).
4. Review of State Agriculture Policy in Gujarat (Part I and II).
5. Role of Water Markets in Groundwater Management in Rajasthan.
6. Co-operative Marketing Societies in the States- Reasons for Success and Failure (A Consolidated Report).
7. Creation of Data Bank for Gujarat & Rajasthan in AER Centre, Vallabh Vidyanagar.
8. Pilot Study for Estimation of Seed, Feed and Waster Ratios for Major Foodgrains in Rajasthan.
9. Viable Entrepreneurial Trades of Women in Agriculture: (Suggested by ICAR).
10. Evaluation of participatory Irrigation Management including water use Association (suggested by D/O Water Resources).
11. Bt Cotton.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre since 1970. Since 1983, on the recommendation of the Expert Committee headed by Dr. S.R. Sen, the single crop approach has been replaced by crop complex approach under which the number of clusters has been increased to 60 from 40, thereby providing a wider and varied base for data generation. Gujarat State is divided into 8 crop zones on the basis of important crops grown in the districts of Gujarat. Under the crop complex approach ten crops, namely, bajra, groundnut, cotton, arhar, wheat, sesamum and mustard are being studied continuously and simultaneously for three consecutive years in the same cluster of villages for the block period 1999-2002. At present, there is a sample of 600 cultivators, drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0 to 2.0 hectares, 2.0 to 4.0 hectares, 4.0 to 5.0 hectares and 6.0 hectares and above. The compiled data for all the 60 clusters for the year 2001-2002 have been provided to the Directorate of Economics & Statistics, Government of India, New Delhi.

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## **WORK DONE DURING THE YEAR 2004-05**

Work done during the year 2004-05 (ending 31<sup>st</sup> March, 2005) is as under:

### **I. Research Project Work Completed:**

1. Review of State Agriculture Policy in Gujarat: Part I & II
2. Review of State Agriculture Policy in Rajasthan: Part I & II
3. Agro-Economic Research for Agriculture Policy (Gujarat and Rajasthan Experience: 1980-2004)
4. Rural Non-farm Employment in Gujarat
5. Building up of an Efficient Marketing System to Obviate the Need for Large-Scale State Intervention in Gujarat
6. Co-operative Marketing Societies: Reasons for Success and Failure (consolidated report)
7. Water Use Practices, Management and Marketing in Rajasthan

### **II. Research Project Work in Progress:**

1. Pilot Study for Estimation of Seed, Feed and Water Ratios for Major Foodgrains in Rajasthan
2. Viable Entrepreneurial Trades for Women in Agriculture: Rajasthan
3. Evaluation of Participatory Irrigation Management including Water Use Association
4. Bt. Cotton

**III.** The Governing Body meeting of Agro-Economic Research Centre was held on 18<sup>th</sup> Feb, 2005. The meeting was attended by Dr. P. J. Patel Vice-Chancellor, Sardar Patel University, Dr. V. S. Vyas, Professor Emeritus, Institute of Development Studies, Jaipur, Dr. Y. K. Alagh, Vice-Chairman, Sardar Patel Institute of Economic and Social Research, Dr. R. C. Ray, Adviser, Directorate of Economics & Statistics, Ministry of Agriculture, GOI, New Delhi. Dr. A. S. Patel, Retd. Professor, Department of Economics, Sardar Patel University, Dr. Mahesh Pathak, Honorary Director, Agro-Economic Research Centre, Dr. H. F. Patel, Honorary Joint Director, Agro-Economic Research Centre and Dr. (Mrs.) R. A. Dutta Deputy Director, Agro-Economic Research Centre.

**IV.** ICAR has recommended "Rural Agricultural Work Experience" Programme for the students of final year B.Sc. (Agri.) degree in Gujarat Agriculture University to knowledge about working of different institutes. Under this programme, we have given

exposure of our Centre to around 85 students providing detailed of functions of centre for 5 days in batch of 15 to 20 students.

## **V. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre is operating in Gujarat since 1970. Since 1983, on the recommendations of the Expert Committee headed by Dr. S. R. Sen the single crop approach has been replaced by crop complex approach under which the number of cluster have been increased 60 from 40, thereby providing a wider and varied base for generation of cost estimates of the crops. Gujarat State is divided into 9 homogeneous zones on the basis of important crops grown soil types, rainfall etc. in the districts. Under the crop complex approach, up to 10 crops, namely bajra, groundnut, cotton, tur, jowar, wheat, sugarcane, onion, tobacco and mustard were studied. The 8 crops namely, bajra, groundnut, cotton, wheat, mustard, tur, sesamum and onion are under study on continuous and simultaneous basis for three consecutive years 2002 to 2005 in the same cluster of villages. At present, there is sample of 600 cultivators drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0-2.0 hectares, 2.0-3.0 hectares, 4.0-6.0 hectares and 6.0 hectares and above. Coding work of crops, data entry in the computer, including its validation is over in case of all the 60 clusters for the year 2003-04 and the same have been provided to the Directorate of Economics & Statistics, Govt. of India, New Delhi.

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## **WORK DONE DURING THE YEAR 2005-06**

**Work done during the year 2005-06 (ending 31<sup>st</sup> March, 2006) is as under:**

### **I. Research Project Work Completed:**

1. Evaluation of Participatory Irrigation Management including Water Use Association
2. Books Published:
  - a) Review of State Agriculture Policy in Gujarat
  - b) Review of State Agriculture Policy in Rajasthan

### **II. Research Project Work in Progress:**

1. Pilot Study for Estimation of Seed, Feed and Water Ratios for Major Foodgrains in Rajasthan
2. Viable Entrepreneurial Trades for Women in Agriculture: Rajasthan
3. Bt. Cotton

**III.** Meeting of the Officers-in-Charge of all AER Centres was held on 5<sup>th</sup> and 6<sup>th</sup> August, 2005 at University of Delhi. This meeting was attended by Dr. H. F. Patel, Hon. Jt. Director and Dr. (Mrs.) R. A. Dutta, Dy. Director.

**IV.** Evaluation of Agro-Economic Research Centers: The Technical Advisory Committee on evaluation of AER Centres had decided to have power point presentation of each Centre to the members of the TAC for evaluation of AER Centers. Power point presentation of our Centre was done on 11<sup>th</sup> March, 2006 at Planning Commission, Yojana Bhavan, New Delhi. This was presented by Dr. Mahesh Pathak, Honorary Director, Dr. H. F. Patel, Hon. Jt. Director and Rs. R. A. Dutta, Dy. Director.

### **V. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre is operating in Gujarat since 1970. Since 1983, on the recommendations of the Expert Committee headed by Dr. S. R. Sen the single crop approach has been replaced by crop complex approach under which the number of cluster have been increased 60 from 40, thereby providing a wider and varied base for generation of cost estimates of the crops. Gujarat State is divided

into 8 homogeneous zones on the basis of important crops grown soil types, rainfall etc. in the districts. Under the crop complex approach, ten crops namely, bajra, groundnut, cotton, wheat, mustard, tur, sesamum, paddy, maize and onion are under study on continuous and simultaneous basis for three consecutive years 2005 to 2008 in the same cluster of villages. At present, there is sample of 600 cultivators drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0-2.0 hectares, 2.0-3.0 hectares, 4.0-6.0 hectares and 6.0 hectares and above. Coding work of crops, data entry in the computer, including its validation and revalidation is under progress in case of all 60 clusters for the year 2004-05.

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## **WORK DONE DURING THE YEAR 2006-07**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 2007, is as under:-

### **I. Project Work Completed:**

1. Participatory Irrigation Management in Gujarat (A Study in Mehsana, Anand Bhavnagar Districts), by H. F. Patel and V. J. Dave, September, 2006.
2. Viable Entrepreneurial Trades of Women in Agriculture: Rajasthan, by Rajeshree A. Dutta, December, 2006.
3. Study for Estimation of Seed, Feed and Wastage Ratios for Major Food grains in Rajasthan, by Rajeshree A. Dutta, February, 2007.

### **II. Problem-Oriented Studies in Progress:**

1. Returns to Bt. Cotton vis-à-vis Traditional Cotton Varieties in Gujarat State.
- A. The Agro-Economic Research Center had completed studies on Review of State Agriculture Policy for Rajasthan and Gujarat. The Government of Rajasthan invited the Centre to make Power Point Presentation on the Rajasthan report on October 2007 at Jaipur. The Agro Centre made this presentation to senior officials of the GoR as well as some independent experts including Prof. V. S. Vyas.

Shri Bhupendrasingh Chudasama, Minister, Agriculture, GoG invited the Centre to make similar presentation on Gujarat report in November 2006. Senior Governments officials including Dr. Avinash Kumar, Addl. Chief Secretary, Dept. of Agriculture, GoG and others experts participated in this meeting.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre is operating in Gujarat since 1970. Since 1983, on the recommendations of the Expert Committee headed by Dr. S. R. Sen the single crop approach has been replaced by crop complex approach under which the number of cluster have been increased 60 from 40, thereby providing a wider and varied base for generation of cost estimates of the crops. Gujarat State is divided

into 8 homogeneous zones on the basis of important crops grown soil types, rainfall etc. in the districts. Under the crop complex approach, ten crops namely, bajra, groundnut, cotton, wheat, mustard, tur, sesamum, paddy, maize and onion are under study on continuous and simultaneous basis for three consecutive years 2005 to 2008 in the same cluster of villages. At present, there is sample of 600 cultivators drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0-2.0 hectares, 2.0-3.0 hectares, 4.0-6.0 hectares and 6.0 hectares and above. Coding work of crops, data entry in the computer, including its validation is over in case of all the 60 clusters for the year 2004-05 and the same have been provided to the Directorate of Economics & Statistics, Govt. of India, New Delhi. Data entry for the year 2005-06 is in progress.



## **WORK DONE DURING THE YEAR 2007-08**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 2008, is as under:-

### **I. Project Work Completed:**

1. Returns to Bt. Cotton vis-à-vis Traditional Cotton Varieties in Gujarat State, by V. D. Shah, May, 2007.

### **II. Problem-Oriented Studies in Progress:**

1. State Budgetary Resources and Agricultural Development in Rajasthan.
2. State Budgetary Resources and Agricultural Development in Gujarat.
3. Impact Evaluation of Watersheds treated under NWDPR during 10<sup>th</sup> Plan in Rajasthan.
4. The Impact of Macro Management of Agriculture Scheme Gujarat - Rajasthan.
5. Mid-Term Evaluation Studies of National Development for Rainfed Areas during Tenth Plan in Maharashtra.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre is operating in Gujarat since 1970. Since 1983, on the recommendations of the Expert Committee headed by Dr. S. R. Sen the single crop approach has been replaced by crop complex approach under which the number of cluster have been increased 60 from 40, thereby providing a wider and varied base for generation of cost estimates of the crops. Gujarat State is divided into 8 homogeneous zones on the basis of important crops grown soil types, rainfall etc. in the districts. Under the crop complex approach, ten crops namely, bajra, groundnut, cotton, wheat, mustard, tur, sesamum, paddy, maize and onion are under study on continuous and simultaneous basis for three consecutive years 2005 to 2008 in the same cluster of villages. At present, there is sample of 600 cultivators drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0-2.0 hectares, 2.0-3.0 hectares, 4.0-6.0 hectares and 6.0 hectares and above. Coding work of crops, data entry in the computer, including its validation is over in case of all the 60 clusters for the year 2005-06 and the same have been provided to the Directorate of Economics & Statistics, Govt. of India, New Delhi. Data entry for the year 2006-07 is in progress.

## WORK DONE DURING THE YEAR 2008-09

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 2009, is as under:-

### **I. Project Work Completed**

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### **II. Problem-Oriented Studies in Progress:**

1. State Budgetary Resources and Agricultural Development in Rajasthan.
2. State Budgetary Resources and Agricultural Development in Gujarat.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre is operating in Gujarat since 1970. Since 1983, on the recommendations of the Expert Committee headed by Dr. S. R. Sen the single crop approach has been replaced by crop complex approach under which the number of cluster have been increased 60 from 40, thereby providing a wider and varied base for generation of cost estimates of the crops. Gujarat State is divided into 8 homogeneous zones on the basis of important crops grown soil types, rainfall etc. in the districts. Under the crop complex approach, ten crops namely, bajra, groundnut, cotton, wheat, mustard, tur, sesamum, paddy, maize and onion are under study on continuous and simultaneous basis for three consecutive years 2008 to 2011 in the same cluster of villages. At present, there is sample of 600 cultivators drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0-2.0 hectares, 2.0-3.0 hectares, 4.0-6.0 hectares and 6.0 hectares and above. Coding work of crops, data entry in the computer, including its validation is over in case of all the 60 clusters for the year 2006-07 and the same have been provided to the Directorate of Economics & Statistics, Govt. of India, New Delhi. Data entry for the year 2007-08 is in progress.

## **WORK DONE DURING THE YEAR 2009-10**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31st March, 2010, is as under:-

### **I. Project Work Completed**

1. State Budgetary Resources and Agricultural Development in Rajasthan, by Rajeshree A. Dutta, September, 2009.
2. State Budgetary Resources and Agricultural Development in Gujarat, by Rajeshree A. Dutta, December, 2009.
3. Impact Evaluation of Revised National Watershed Development Project for Rainfed Areas (NWDPA) during 10<sup>th</sup> Plan in Rajasthan, by V D Shah, January, 2010.

### **II. Problem-Oriented Studies in Progress:**

1. Evaluation of Comprehensive District Agriculture Plans (C-DAPs) of Gujarat State.
2. Impact of NREGA on Wage Rates, Food Security and Rural Urban Migration in Rajasthan.
3. Possibilities and Constraints for Increasing the Production of Pulses in Rajasthan and Impact of National Food Security Mission on Pulses.
4. Impact of NREGA on Wage Rates, Food Security and Rural Urban Migration in Gujarat.
5. Impact of National Horticulture Mission (NHM) Scheme in Rajasthan.
6. Economic of fodder cultivation and its processing and marketing in Gujarat.
7. Evaluation of Comprehensive District Agriculture Plans (C-DAPs) of Rajasthan State.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre is operating in Gujarat since 1970. Since 1983, on the recommendations of the Expert Committee headed by Dr. S. R. Sen the single crop approach has been replaced by crop complex approach under which the number of cluster have been increased 60 from 40, thereby providing a wider and varied base for generation of cost estimates of the crops. Gujarat State is divided into 8 homogeneous zones on the basis of important crops grown soil types, rainfall etc. in the districts. Under the crop complex approach, ten crops namely, bajra, groundnut, cotton, wheat,

mustard, tur, sesamum, paddy, maize and onion are under study on continuous and simultaneous basis for three consecutive years 2008 to 2011 in the same cluster of villages. At present, there is sample of 600 cultivators drawn from different size group of holdings. The five size groups are: below 1.0 hectare, 1.0-2.0 hectares, 2.0-3.0 hectares, 4.0-6.0 hectares and 6.0 hectares and above. Coding work of crops, data entry in the computer, including its validation is over in case of all the 60 clusters for the year 2007-08 and the same have been provided to the Directorate of Economics & Statistics, Govt. of India, New Delhi. Data entry for the year 2008-09 is in progress.

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## **WORK DONE DURING THE YEAR 2010-11**

Work done in the Agro-Economic Research Centre, Vallabh Vidyanagar, during the year ending 31<sup>st</sup> March, 2011, is as under:-

### **I. Project Work Completed**

1. Evaluation of Comprehensive District Agriculture Plans (C-DAPs) of 3 Districts of Gujarat, by Mahesh Pathak and V. D. Shah, January, 2011.

### **II. Problem-Oriented Studies in Progress:**

1. Impact of NREGA on Wage Rates, Food Security and Rural Urban Migration in Rajasthan.
2. Possibilities and Constraints for Increasing the Production of Pulses in Rajasthan and Impact of National Food Security Mission on Pulses.
3. Impact of NREGA on Wage Rates, Food Security and Rural Urban Migration in Gujarat.
4. Impact of National Horticulture Mission (NHM) Scheme in Rajasthan.
5. Economic of fodder cultivation and its processing and marketing in Gujarat.
6. Evaluation of Comprehensive District Agriculture Plans (C-DAPs) of Rajasthan State.

### **III. Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Gujarat.**

The Comprehensive Scheme has been entrusted to the Agro-Economic Research Centre is operating in Gujarat since 1970. Since 1983, on the recommendations of the Expert Committee headed by Dr. S. R. Sen the single crop approach has been replaced by crop complex approach under which the number of cluster have been increased 60 from 40. Gujarat State is divided into 8 homogeneous zones on the basis of important crops grown soil types, rainfall etc. in the districts. Under the crop complex approach, ten crops namely, bajra, groundnut, cotton, wheat, mustard, tur, sesamum, paddy, maize and onion are under study on continuous and simultaneous basis for three consecutive years 2008 to 2011 in the same cluster of villages. At present, there is sample of 600 cultivators drawn from different size group of holdings. Coding work of crops, data entry in the computer, including its validation is over in case of all the 60 clusters for the year 2008-09 and the same have been provided to the Directorate of Economics & Statistics,

Govt. of India, New Delhi. Data entry for the year 2009-10 is in progress.

**Papers published:**

- 1) Vulnerability to Agricultural Drought in Western Odisha: A Case Study of Representative Blocks', *Agricultural Economics Research Review (ISSN: 0971-3441)*, Vol.24, No.1, Jan-June 2011, pp-47-56, by Dr. M. Swain.
- 2) Rainfall Pattern, Drought and Agricultural Instability in Bolangir, India, by Dr. M. Swain in Proceedings of Odisha Environment Congress 2010, Centre for Environment and Development, Trivandrum and Human Development Foundation, Bhubaneswar. Eds: Babu Ambat, Smita Mishra Panda & Others, 2010, pp-84-95.

**Conference/Seminar paper presentation:**

- 3) Paper on 'Rainfall Pattern, Drought and Agricultural Instability in Bolangir (Part-I)', presented in the Odisha Environment Congress jointly organized by Council for Human Development, Bhubaneswar, Centre for Environment and Development, Trivandrum held at National Museum of Natural History, Bhubaneswar, December 22-24, 2010, by Dr. M. Swain.

**Participation in Training Programme:**

- 'TISS-EPW Workshop on Exploratory Data Analysis' held at Tata Institute of Social Sciences, Mumbai held during December 06-11, 2010 sponsored by UGC, New Delhi, by Dr. M. Swain.

**Review of Research Report:**

1. Economics of Contract Broiler Farming in Maharashtra (AERC Report/2011), S.S. Kalamkar, Gokhale Institute of Politics and Economics, Pune (reviewed in March 2011), by Dr. M. Swain.

**IV. Library**

- Journals Subscribed /Gift: (2010-11)
- Gift:
  01. Agricultural Situation in India
  02. Krushi Govidya
- Books Purchase: AERC : 19

**Annexure I****List of AERC Reports, Publications, Conferences and Seminars****A) Research Studies/Reports Completed**

Sr. No.	Report No.	Title of Report
1.	1.	A Study of Wheat Prices in the States of Gujarat and Rajasthan, by V. S. Vyas, 1963.
2.	2.	The Organization and Disintegration of a Collective Farming Society: A Case Study of a Gramdan Village, by K. M. Choudhary, July, 1966.
3.	3.	Economics of Well Irrigation in a Rajasthan Village, by K. R. Rakhral, published as an article in <i>Artha Vikas</i> , January 1967.
4.	4.	Agricultural Labour in Four Indian Villages, Ed. by V. S. Vyas, May, 1964.
5.	5.	Command Area of the Dantiwada Project (Socio-Economic Survey of Three Banaskantha Villages in Gujarat), by B. M. Desai, November, 1964.
6.	6.	Working of Fair Price Shops in Gujarat and Rajasthan (with Special Reference to Ahmedabad and Jaipur Cities), by R. M. Patel, March, 1965.
7.	7.	A Study of Pilot Co-operative Farming Societies in Gujarat and Rajasthan by M. D. Desai and K. S. Karanth, December, 1964.
8.	8.	Factors Affecting Marketable Surplus and Marketed Supplies (A Study in Two Regions of Gujarat and Rajasthan) by V. S. Vyas & M. H. Maharaja, January, 1966.
9.	9.	Factors Affecting Acceptance of Improved Agricultural Practices (A Study in an I. A. D. P. District in Rajasthan), by K. M. Choudhary, November, 1965.
10.	10.	Economics of Cotton Cultivation (A Study in a selected region of Sabarkantha district of Gujarat), by M. H. Maharaja, May, 1966.
11.	11.	Economic Survey of Borsad Taluka (Gujarat State) with Special Reference to the Impact of Community Development Programme by M. L. Bhat, December, 1966.
12.	12.	An Evaluation of Some Aspects of Hybrid Maize Programme in Dahod Taluka (Panchmahal District, Gujarat), by B. M. Desai, January, 1967.
13.	13.	An Assessment of Co-operative Farming Societies in Gujarat and Rajasthan (A few Case Studies), by K. M. Choudhary, M. T. Bapat, N. R. Shah, D. P. Gupta, K.R. Pichholiya and S.B. Saxena, August, 1967.

14.	14.	An Enquiry into the Implementation of Farm Plans in Bardoli Taluka (A Study in an I.A.D.P. District in Gujarat) by V.S.Dharap and M. H. Maharaja, August, 1967.
15.	15.	New Strategy of Agricultural Development in Operation (A Case Study of the Kaira District in Gujarat), by B. M. Desai and M. D. Desai, July, 1968.
16.	16.	Conditions of Stability and Growth in Arid Agriculture, by N. S. Jodha and V. S. Vyas, December, 1968.
17.	17.	Significance of the New Strategy of Agricultural Development for Small Farmers: A Cross-sectional Study of Two Areas, by V.S. Vyas, D.S. Tyagi and V. N. Misra, January, 1969.
18.	18.	A Study of the Hybrid Bajra Programme in the Kaira District, Gujarat (Summer 1967-68), by N.R. Shah, June, 1969.
19.	19.	A Study of the Hybrid Bajra Programme in the Ahmedabad District, Gujarat (Kharif, 1968-69), by V.S. Dharap, June, 1969.
20.	20.	Some Aspects of Long Term Agricultural Finance - A Study of Two Areas in Gujarat, by N.S. Jodha & M.L. Bhat, July, 1969.
21.	21.	A Study of High Yielding Varieties Programme in the Kota District, Rajasthan (Rabi 1968-69), by D.S. Tyagi and V.N. Misra, October, 1969.
22.	22.	Prospects and Problems of Dairy Development in a Desert Region (A Study in the Bikaner District of Rajasthan) by N.S. Jodha and K.M. Choudhary, March, 1970.
23.	22a	<i>Economics of Dairy Farming in Mehsana District of Gujarat State</i> by Dr. V.S. Vyas and K.M. Choudhary, 1971.
24.	23.	An Enquiry into the Working of Cooperative Credit Institutions (A Study in Bhilwara District in Rajasthan), by M.L. Bhat & N.R. Shah, July, 1971.
25.	24.	Economic Profile of Marginal Farmers and Labourers ( <i>A Study in the Borsad Taluka of Gujarat</i> ) by R.M. Patel, May, 1972.
26.	25.	Green Revolution and Problems of Marketing (A Study of Production and Marketing of Bajra in three Districts of Gujarat), by S. L. Bapna, July, 1972.
27.	26.	Some Aspects of Co-operative Short Term Agricultural Finance (A Study in Three Areas in Gujarat), by N.S. Jodha, March, 1973.
28.	27.	Integrated Dryland Agricultural Development Programme: A Case Study of the Rajkot Taluka in Gujarat (Rabi 1971-72), by H.F. Patel, April, 1973.
29.	28.	Economic and Social Implications of Green Revolution (A Case Study of the Kota District), by S.L. Bapna, May, 1973.



30.	29.	Drought Prone Area Programme : A Case Study of the Banaskantha District in Gujarat (Rabi 1971-72), by R.D. Sevak, May, 1973.
31.	30.	Saving and Investment in an Agriculturally Prosperous Area (A Study of Farmers in Surat District), 1969-70, by M.D. Desai, 1973. (Supplement) Employment, Income and Levels of Living of Agricultural Labourers (A Study in the Surat District, Gujarat), 1969-70, by M.D. Desai, 1974.
32.	31.	Consumption Pattern in Rural Gujarat: A Study of Four Villages in Anand Taluka, by V.C. Patel, August, 1973.
33.	32.	Drought Prone Area Programme: A Study of the Banaskantha District in Gujarat (Kharif 1972-73) by K.M. Choudhary and R. D. Sevak, October, 1973.
34.	33.	Saving and Investment in an Agriculturally Prosperous Area (A Study in the Kota District, Rajasthan), 1970-71, by S.L. Bapna and N.R. Shah, December, 1973.
35.	34.	Integrated Dryland Agricultural Development Programme: A Case Study of Rajkot Taluka in Gujarat, 1972-73, by R.M. Patel and H.F. Patel, May, 1974.
36.	35.	Saving and Investment in an Agriculturally Prosperous Area (A Case Study of the Surat District in Gujarat), 1970-71, by M.D. Desai, June, 1974.
37.	36.	Saving and Investment in an Agriculturally Prosperous Area (A Study in the Kota District, Rajasthan), 1971-72, by S.L. Bapna, October, 1974.
38.	37.	Employment Pattern in Rural Gujarat (A Study of Four Villages in the Anand Taluka), 1970-71, by V.C. Patel, R. Indu and Vilas P. Patel, January, 1975.
39.	38.	Drought Prone Area Programme : A Case Study of the Banaskantha District in Gujarat (Rabi & Summer 1972-73), by R.D. Sevak, March, 1975.
40.	39.	Employment Situation in Dry Agriculture: A Study in an IDAD Project Area (Rajkot Taluka, Gujarat), by H.F. Patel, April, 1975.
41.	40.	Saving and Investment in an Agriculturally Prosperous Area: A Case Study of the Surat District, 1971-72, by M. D. Desai, April, 1975.
42.	41.	Saving and Investment in an Agriculturally Prosperous Area (A Case Study in the Kota District, Rajasthan), 1972-73, by S.L. Bapna, May, 1975.
43.	42.	Levels of Agricultural Development in Tehsils of Rajasthan, by M. T. Pathak and M.D. Desai, August, 1975.

44.	42a	Development of Agricultural in the Backward Regions of Gujarat: Facts and Issues, by Mahesh T. Pathak, Mahendra D. Desai and A.S. Charan, January, 1974.
45.	42b	A Study of Storage Space for Foodgrains (A Micro Study of Cambay Taluka, Gujarat), by S. L. Bapna, February, 1975.
46.	43.	Saving and Investment in an Agriculturally Prosperous Area: A Study in the Kota District, Rajasthan, 1970-71, 1972-73, General Report, by S.L. Bapna and Case Studies, by H.M. Verma, October, 1975.
47.	44.	A Study of Impact of Famine and Relief Measures in Gujarat and Rajasthan (with Special Reference to the Banaskantha & Barmer Districts), by K. M. Choudhary & M.T. Bapat, December, 1975.
48.	45.	An Economic Profile of the Kadana Irrigation Project and its Command Area, by D. M. Brahmbhatt, March, 1976.
49.	46.	Factors Affecting Milk Supply to Co-operative Dairies in Gujarat: A Study of Amul and Dudhsagar Dairies, by V.C. Patel & M.D. Desai, April, 1976.
50.	47.	Saving and Investment in an Agriculturally Prosperous Area (A Study in the Surat District, Gujarat) Combined Report 1969-70/1971-72, General Report by M.D. Desai and Case Studies, by A.D. Chauhan, July, 1976.
51.	48.	Transforming Tribal Agriculture (An Evaluation of the Leap Forward Project of the Gujarat State Fertilizers Company Ltd., by D.M. Brahmbhatt & M. T. Bapat, September, 1976.
52.	49.	Some Aspects of Agricultural Development in Gujarat (1949-50 -1974-75) (A Review & Final Report), by Mahesh Pathak, M.D. Desai and H.F. Patel, April, 1977.
53.	50.	An Evaluation of Drought Prone Area Programme (A Study of the Jodhpur and Jaisalmer Districts in Rajasthan), by R.D. Sevak and S.D. Purohit, Case Study by V.M. Patel, May, 1977.
54.	51.	4 P Plan-Crop Insurance Scheme for Hybrid-4 Cotton in Gujarat (An Evaluation of the Promotional Project "Package of Practices for Productivity and Prosperity" of the GSFC Ltd.), by K.M. Choudhary, August, 1977.
55.	52.	Working of Farmers' Service Societies in Gujarat (Two Case Studies of Tribal Areas in Gujarat) by D.M. Brahmbhatt & M. T. Bapat, January, 1978.
56.	53.	Economic Relationship between Crop Farming and Dairying in a Developing Area: A PL-480 Micro-Level Study of South Gujarat, by A. S. Patel and N.S. Jodha, January, 1979.
57.	54.	Block Level Plan, Balasinor Taluka (Kheda District, Gujarat), by Mahesh Pathak and N.R. Shah, October, 1979.

58.	55.	Performance of Hybrid Bajri in Gujarat, 1966-67 to 1976-77, by R.D. Sevak and D. M. Brahmbhatt, March, 1980.
59.	56.	Block Level Plan, Thasra Taluka (Kheda District, Gujarat), by Mahesh Pathak and Navin R. Shah, September, 1981.
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61.	58.	Socio-Economic Profile, Narmada Command Area (Ahmedabad District), 1981), First Phase Report - June, 1982.
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63.	60.	Soil Testing Service in Rajasthan, by R.D. Sevak, September, 1982.
64.	61.	Working of Small Farmers' Development Agency: Bharuch District, Gujarat, by M.T. Bapat, March, 1983.
65.	62.	Working of Small Farmers' Development Agency: Udaipur District, Rajasthan, by S. D. Purohit, June, 1983.
66.	63.	Production and Marketing of Mangoes in Gujarat, by D. M. Brahmbhatt, January, 1984.
67.	64.	Socio-Economic Profile: Narmada Command Area (Ahmedabad District Second Phase Report), September, 1985, 2 <sup>nd</sup> phase report, Tables March, 1985 (Published Report no. 58).
68.	65.	Economics of Dairy Enterprise in Gujarat (Sabarkantha District, Gujarat), by R.M. Patel, K.M. Choudhary, R.D. Sevak and V.D. Shah, September, 1985.
69.	66.	Social Forestry Programme in Rajasthan (with Special Reference to Dungarpur and Bharatpur Districts, Rajasthan), by D.M. Brahmbhatt, June, 1985.
70.	67.	Economics of Tubewell Irrigation in Gujarat, by Mahesh Pathak, A. S. Patel and H. F. Patel May, 1985.
71.	68.	Cost of Milk Production in Gujarat (A Case Study of Mehsana District), by R. D. Sevak, June, 1986.
72.	69.	Groundnut Development Programme in Gujarat, by Navin R. Shah, July, 1986.
73.	70.	Repayment of Minor Irrigation Loan of Land Development Bank in Gujarat (A Case Study of Dhanera Taluka of Banaskantha District), by V.D. Shah, September, 1986.
74.	71.	Cost of Milk Production in Rajasthan (A Case Study of Bhilwara District), by S.D. Purohit, October, 1986.
75.	72.	Socio-Economic Profile of Action Research Programme Area in Mahi Kadana Irrigation Project, by D. M. Brahmbhatt, September, 1987.

76.	73.	Intensive Pulse Development Programme in Gujarat (Case Studies of Panchmahals and Bharuch Districts), by Madhukar Bapat, July, 1987.
77.	74.	Price Support Operations for Mustard Seed by NAFED in Rajasthan by Rajnarayan Indu, August, 1987.
78.	75.	National Rural Employment Programme in Gujarat (A Case Study of Kheda District), by D. M. Brahmbhatt, V. M. Patel and V. J. Dave, November, 1987.
79.	76.	Evaluation of Catchment Area Development Programme (A Case Study of Dantiwada Catchment in Gujarat), by Navin R. Shah, November, 1987.
80.	77.	Some Reflections on Integrated Dry Land Agricultural Development (A Case Study of Rajkot Taluka, Gujarat, by R.M. Patel, February, 1988.
81.	78.	Evaluation of Public Distribution System in Rajasthan by K. M Choudhary, May, 1988.
82.	79.	Socio-Economic Profile of Action Research Programme Area in Mahi-Kadana Irrigation Project by D.M. Brahmbhatt, May, 1988.
83.	80.	Fertilizer Consumption in Gujarat, by V.D. Shah, March, 1989.
84.	81.	An Evaluation Study of Bajra Minikit Programme (A Case Study of Jaipur District in Rajasthan), by S.D. Purohit, March, 1989.
85.	82.	Terms of Trade for Agriculture (A Case Study of Gujarat), by M. L. Jhala, April, 1989.
86.	83.	Recent Trends in the Cost of Cultivation in Gujarat, by A. S. Patel and H.F. Patel, September, 1989.
87.	84.	Prospects of Increasing Oilseed and Pulse Production in Gujarat, by N.R. Shah, January, 1990.
88.	85.	A Profile of Employment in Rajasthan-Case Studies of Barmer and Jaisalmer Districts, by D.M. Brahmbhatt, V.M. Patel, V.J. Dave & H.M. Verma, November, 1990.
89.	86.	Action Research Programme - An Interim Evaluation (A Case Study of Mahi-Kadana Irrigation Project), by A. S. Patel & D. M. Brahmbhatt, October, 1991.
90.	87.	Transportation of Agricultural Products in Gujarat, by H. G. Patel, February, 1993.
91.	88.	Some Aspects of Land Use Planning in Gujarat, by Rajeshree A. Dutta, March, 1993.
92.	89.	Impact of Fertilizer Price Hike on Gujarat Agriculture, by Mahesh Pathak, V. D. Shah and M. L. Jhala, June, 1993.
93.	90.	Evaluation of Watershed Development Programme (A Study of Two Districts in Rajasthan), by S. D. Purohit, March, 1994.

94.	91.	Inter-District Variations in Agricultural Development in Rajasthan-1956-57 to 1989-90, by D. Bagchi & H. M. Verma, March, 1994.
95.	92.	Economic Viability of Small and Marginal Farms in Rainfed Agriculture (A Case Study of Bhavnagar District in Gujarat), by V. J. Dave, June, 1994.
96.	93.	Economic Viability of Small and Marginal Farms in Irrigated Agriculture (A Study of Panchmahals District in Gujarat), by V.G. Patel, July, 1994.
97.	94.	Inter-District Variations in Agricultural Development in Gujarat: 1949-50 - 1991-92, by Mahesh Pathak, H.F.Patel and Rajeshree A. Dutta, October, 1994.
98.	95.	Recovery Performance of Institutional Farm Credit in Rajasthan (An In-depth Study in Bharatpur District) by D.M. Brahmbhatt and V.J. Dave, September 1995.
99	96.	Emerging Problems of Agricultural Marketing (A Case Study of Tomato in Gujarat), by V. M. Patel, November, 1995.
100	96/1	Impact of Subsidies on Agricultural Development in Gujarat, by R. A. Dutta, 1995.
101	97.	Evaluation of Engineering Structures under Soil Conservation Scheme (A Case Study of Chambal RVP and Sahibi FPR in Rajasthan), by S.D. Purohit and H.M. Verma, November, 1995.
102	98.	Emerging Problems of Agricultural Marketing (A Case Study of Mustard in Gujarat), by N.R. Shah, December, 1995.
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104.	100.	Emerging Problems of Agricultural Marketing (A Case Study of Banana in Gujarat), by V.M. Patel, September, 1996.
105.	101.	Evaluation of Engineering Structures under Soil Conservation Scheme (A consolidated report of AERC Studies), by S.D. Purohit, August, 1996.
106.	102.	Impact of National Watershed Development Project for Rainfed Areas (NWDPR) in Gujarat, by V. D. Shah and V.G. Patel, December, 1996.
107.	103.	Analysis of Trends in Operational Holdings in Gujarat, by Rajeshree A. Dutta, March, 1997.
108.	104.	Analysis of Trends in Operational Holdings in Rajasthan, by Rajeshree A. Dutta and H.M. Verma, March, 1997.
109.	105.	Evaluation of Fish Farmers' Development Agencies in Gujarat (A Study in Valsad, Panchmahals and Rajkot districts), by V.J. Dave, September, 1997.

110.	106.	Economics of Export oriented Horticulture Crop Chiku (Sapota) in Gujarat (A Case Study in Valsad district), by V. J. Dave, July, 1998.
111.	107.	Oilseeds Development Perspective under Liberalised Economy, by Rajeshree A. Dutta and H.M. Verma, July, 1998.
112.	108.	Production and Utilisation Pattern of Milk at the Rural Producer's Level in Gujarat, by V. D. Shah, October, 1998.
113.	109.	Economics of Pulses Production and Identification of Constraints in Raising their Production in Rajasthan, by H. M. Verma, October, 1999.
114.	110.	Economics of Pulses Production and Identification of Constraints in Raising their Production in Gujarat, by V. G. Patel, February, 2000.
115.	111.	Role of Co-operative Credit in the Development of Different Size Group of Farmers in Gujarat (A Case Study in Rajkot district), by V.J. Dave, February, 2000.
116.	112.	Impact of National Watershed Development Project for Rainfed Areas (NWDPA) (A Rapid Assessment), by V.D. Shah, December, 2000.
117.	113.	Evaluation of Management of Seed Supply in Oilseeds and Pulses in Gujarat, by Rajeshree A. Dutta, H.M. Verma and C.F. Patel, December, 2000.
118.	114.	Evaluation of Management of Seed Supply in Oilseeds and Pulses in Rajasthan, by V.D. Shah, April, 2001.
119.	115.	Likely Impact of Liberalised Imports and Low Tariff on Edible Oil Sector in Rajasthan, by Rajeshree A. Dutta and H.M. Verma, July, 2001.
120.	116.	Evaluation of Fish Farmers' Development Agencies (FFDA) in Rajasthan, by Dilip Bagchi and H. M. Verma, August, 2001.
121.	117.	Assessing the Existing Training and Testing Facilities of Farm Machinery in Gujarat, by Mahesh Pathak, H.F. Patel and V.D. Shah, October, 2001.
122.	118.	Flow of Credit to Small and Marginal Farmers in Gujarat, by Shri V. J. Dave and Shri Dilip Chauhan, January, 2002.
123.	119.	Role of Co-operative Credit in the Development of Different Size Groups of Farmers (A Consolidated Study), by V. J. Dave, June, 2002.
124.	120.	Assessing the Existing Training and Testing Facilities of Farm Machinery in Rajasthan, by H. M. Verma, April, 2002.
125.	121.	Evaluation of National Oilseeds and Vegetable Oils Development (NOVOD) Board sponsored Development Programmes for Promotion of Oilseed crops in Non-traditional Areas: Consolidated Report, by R. A. Dutta, January, 2003.

126.	122.	Review of State Agriculture Policy in Rajasthan (Part I and II), by Dilip Bagchi, February, 2004.
127.	123.	Impact of Minimum Support Prices on Agriculture Economy of Gujarat, by V. D. Shah and H. F. Patel, August, 2003.
128.	124.	Rural Non-Farm Employment in Gujarat, by Rajeshree A. Dutta and S. R. Bhaiya, March, 2004.
129.	125.	Co-operative Marketing Societies: Reasons for Success and Failures in Gujarat, by V. J. Dave, June, 2004.
130.	126.	Building Up of an Efficient Marketing System to Obviate the Need for Large-scale State Intervention in Gujarat, by P.K. Singh, May, 2004.
131.	127.	Agro-Economic Research for Agriculture Policy (Gujarat and Rajasthan Experience: 1980-2004), by Mahesh Pathak and V. D. Shah, July, 2004.
132.	128.	Review of State Agriculture Policy in Gujarat ( <u>Part I and II</u> ), by Arun S. Patel, July, 2004.
133.	129.	Role of Water Markets in Groundwater Management in Rajasthan, by H. M. Verma and S. R. Bhaiya, October, 2004.
134.	130.	Co-operative Marketing Societies in the States- Reasons for Success and Failure (A Consolidated Report), by V. J. Dave, September, 2004.
135.	131.	Participatory Irrigation Management in Gujarat (A Study in Mehsana, Anand Bhavnagar Districts), by H. F. Patel and V. J. Dave, September, 2006.
136.	132.	Viable Entrepreneurial Trades of Women in Agriculture: Rajasthan, by Rajeshree A. Dutta, December, 2006.
137.	133.	Study for Estimation of Seed, Feed and Wastage Ratios for Major Food grains in Rajasthan, by Rajeshree A. Dutta, February, 2007.
138.	134.	Returns to Bt. Cotton vis-à-vis Traditional Cotton Varieties in Gujarat State, by V. D. Shah, May, 2007.
139.	135.	State Budgetary Resources and Agricultural Development in Rajasthan, by Rajeshree A. Dutta, September, 2009.
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141.	137.	Impact Evaluation of Revised National Watershed Development Project for Rainfed Areas (NWDPA) during 10 <sup>th</sup> Plan in Rajasthan, by V D Shah, January, 2010
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Sr. No.	Report No.	Title of Report
143.	139.	Impact of NREGA on Wage Rates, Food Security and Rural Urban Migration in Rajasthan, by Mrutyunjay Swain and Shreekant Sharma, April, 2011.
144.	140.	Possibilities and Constraints for Increasing the Production of Pulses in Rajasthan and Impact of National Food Security Mission on Pulses, by Rajeshree A. Dutta and K. M. Kapadia, May, 2011.
145.	141.	Impact of NREGA on Wage Rates, Food Security and Rural Urban Migration in Gujarat, by V D Shah and Manish Makwana, May, 2011.
146.	142.	Impact of National Horticulture Mission (NHM) Scheme in Rajasthan, by M. Swain, R. H. Patel and Manish Kant Ojha, September, 2011.
147.	143.	Evaluation of Comprehensive District Agriculture Plans (C-DAPs) of 3 districts of Rajasthan, by Rajeshree A. Dutta and Dilip Bagchi, November 2011.
148.	144.	Economics of Fodder Cultivation and its Processing and Marketing in Gujarat, by V. D. Shah, Manish Makwana and Shreekant Sharma, November, 2011.
149.	145.	State of Rajasthan Agriculture 2011-12, December 2012, by M.N. Swain, S.S. Kalamkar and Manish Kant Ojha.
150.	146.	State of Gujarat Agriculture 2011-12, December 2012, by M.N. Swain, S.S. Kalamkar and Kalpana Kapadia.
151.	147.	Problems and Prospects of Oilseeds Production in Rajasthan: Special reference to Rapeseed and Mustard, February, 2013, by M.N. Swain
152.	148.	Problems and Prospects of Oilseeds Production in Gujarat: Special reference to Groundnut, April 2013, by M.N. Swain.
153.	149.	Evaluation of Price Support and Market Intervention Scheme in Rajasthan, April 2013, S.S. Kalamkar, M. R. Ojha & T. B. Parihar.
154.	150.	Marketed and Marketable Surplus of Major Foodgrains in Rajasthan, April, 2013, V. D. Shah and Manish Makawana.
155.	151.	Assessment of Pre and Post Harvest Losses in Tur Crop in Gujarat, May 2013, by Rajeshree A. Dutta, Manish Makawana and Himanshu Parmar.
156	152.	Assessment of Pre and Post Harvest Losses in Soybean Crop in Rajasthan, May, 2013, by Rajeshree A. Dutta, Manish Makawana and Himanshu Parmar.



157.	153.	Agro-Economic Research for Agriculture Policy: Gujarat and Rajasthan Experience (1961-2013), November 2014, by Mahesh Pathak, S.S. Kalamkar and V. D. Shah
158.	154.	Adoption of recommended doses of fertilizer on soil test basis by farmers in Gujarat, December 2014, by Mrutunjay Swain, S. S. Kalamkar and Kalpana Kapadia.
159.	155.	Impact of National Food Security Mission (NFSM) on Input use, Production, Productivity and Income in Gujarat, March 2015, R.A. Dutta, S.S. Kalamkar and M. R. Ojha.
160.	156.	Relationship between wholesale prices, retail prices, and details of contributing factors for the price difference of Onion in Gujarat , March 2015, by S. S. Kalamkar and M. Makwana.
161.	157.	Socio-Economic Impact of Check Dam constructed near Tarakpur Village of Khambhat Taluka of Anand district, by S.S. Kalamkar, H.P. Trivedi, S.R. Bhaiya and D. J. Chauhan, July 2014
162.	158.	Estimation of Changes in Income & Cost of Production owing to Changes in Inputs and Hybrid Seeds for major Crops of Gujarat, by S.S. Kalamkar, M.N. Swain & S.R. Bhaiya, December 2014
163.	159.	Socio-Economic Impact Analysis of Introduction of Renewable Energy Technologies in Five Tribal Villages of Gujarat, by S.S. Kalamkar, M.N. Swain and Samir Vohara, March 2015
164.	160.	“Impact Evaluation of Rashtriya Krishi Vikas Yojana (RKVY) in Gujarat”, March 2015, by S.S. Kalamkar, S.R. Bhaiya and M. Swain.
165	161.	“Impact Evaluation of Rashtriya Krishi Vikas Yojana (RKVY) in Rajasthan”, March 2015 by S.S. Kalamkar, and Mrutunjay Swain.
166	162	Soil Health Card Programme in Gujarat: Implementation, Impacts and Impediments (CIPT), January 2016, by Mrutunjay Swain and S.S. Kalamkar
167	163	Evaluation and Assessment of Economic Losses on account of Inadequate Post-harvest Infrastructure Facilities for Fisheries Sector in Gujarat State, March 2016, by H. Sharma, M. Swain and S. S. Kalamkar
168	164	“Impact Assessment and Evaluation of Ration Balancing Program in Gujarat State”, Report No. 164, December 2016, by S. S. Kalamkar, Hemant Sharma and V. K. Boyal.
169	165	“Farmers’ Suicides in Gujarat”, February 2017, by S. S. Kalamkar, M. Swain and T. Parihar.
170	166	“Working of Pressurized Irrigation Network Systems (PINS) in Gujarat”, March 2017, by M. Swain, S. S. Kalamkar and K Kapadia

171	167	“Working of Pressurized Irrigation Network Systems (PINS) in Rajasthan”, March 2017, by M. Swain, H Sharma and M Ojha
172	-	“Impact Evaluation Study of National Horticulture Mission (NHM) and Horticulture Mission for North East and Himalayan States (HMNEH)” - Gujarat, Rajasthan , Madhya Pradesh and Maharashtra
173	168	“Assessment of the Status of Dairying and Potential to Improve Socio-Economic Status of the Milk Producers and Convergence of all Central & State Schemes at District level in Gujarat, June 2017, by S. S. Kalamkar, H. Sharma & M. Makwana
174	169	“Assessment of the Status of Dairying and Potential to Improve Socio-Economic Status of the Milk Producers and Convergence of all Central & State Schemes at District level in Rajasthan, June 2017, by Hemant Sharma and S. S. Kalamkar

## B) Studies for Planning Commission, GOI and Other Public Agency

Sr. No	Report No.	Title of Report	Supported by
1	ACZ13-1/1988	Profile Report- Agro-Climatic Zone No. 13, Gujarat Plains and Hills Region, by Dr. Mahesh Pathak, Dr. A.S. Patel and Dr. H. F. Patel, 1988.	Planning Commission, Government of India, New Delhi
2	ACZ13-2/1988	Strategy for Agricultural Development in Gujarat during the Eighth Plan-Agro-Climatic Zone No. 13, by Dr. Mahesh Pathak, 1988.	Planning Commission, Government of India, New Delhi
3	ACZ14-1/1988	Profile Report- Agro-Climatic Zone No. 14, Western Dry Region, Rajasthan, by Dr. Mahesh Pathak and Dr. Dilip Bagchi, 1988.	Planning Commission, Government of India, New Delhi
4	ACZ14-2/1988	Strategy for Agricultural Development in Gujarat during the Eighth Plan-Agro-Climatic Zone No. 14, Western Dry Region, Rajasthan, by Dr. Mahesh Pathak, 1988.	Planning Commission, Government of India, New Delhi

**C) Research Studies in Progress (July 2017)**

Sl.	Name of the Study	Funding agency
1	Pilot Study for developing state level estimates of crop area and production on the basis of sample sizes recommended by Prof. Vaidyanathan Committee Report - Gujarat State	ICAR-Indian Agricultural Statistics Research Institute (IASRI), Pusa, New Delhi ( <i>funded by Ministry of Agriculture &amp; Farmers Welfare, Govt. of India, New Delhi to IASRI covering five states</i> )

**D) Research Studies in Progress- as a Coordinator (July 2017)**

Sl.	Name of the Study	AERC Units involved in the study covering the states
1	Assessment of the Status of Dairying and Potential to Improve Socio Economic Status of the Milk Producers and Convergence of all Central and State schemes at district level	Assam, Bihar, Chhattisgarh, Jharkhand, Odisha, Eastern UP, West Bengal, Gujarat and Rajasthan
2	Working of Pressurised Irrigation Network System (PINS) in India	Rajasthan, Gujarat, Maharashtra and Telangana

## E) Village Benchmark Surveys

Sr. No.	Report No.	Village Survey Report
1.	1.	<b>PATADIA:</b> (Sabarkantha District, Gujarat): A Tribal Village Economy in Transition by M.C. Shetty, 1963.
2.	2.	<b>HASTEDA:</b> (Jaipur District, Rajasthan): Economic Life in a Rajasthan Village by M.D. Desai, 1964.
3.	3.	<b>ANKODIA:</b> (Baroda District, Gujarat): Economic Life in a Tobacco Village by R. M. Patel, 1964.
4.	4.	<b>NAURANGDESHAR:</b> (Sriganganagar, district, Rajasthan): A Village in Rajasthan Canal Zone by M. L. Bhat, 1964.
5.	5.	<b>AIDAN-KA-WAS:</b> (Jaipur District, Rajasthan): A Gramdan Village in Rajasthan by K.M. Choudhary, 1964.
6.	6.	<b>KOTHIAKHAD:</b> (Kaira District, Gujarat): Socio-Economic Study of a Ravine Affected Village, by P.J. Bambal, 1966.
7.	7.	<b>AFAWA:</b> (Surat District, Gujarat): An Advanced Village in Traditional Setting, by R.M. Patel, 1966.
8.	8.	<b>JAMBUA:</b> (Panchmahals District, Gujarat): A Tribal Village on Threshold of Modernization by G.O. Parikh, 1967.
9.	9.	<b>FALNA:</b> (Pali District, Rajasthan) : Socio-Economic Profile of a Village in I.A.D.P. District by M. L. Bhat assisted by K. R. Pichholiya, 1967.
10.	10.	<b>MOTIKHADOL:</b> (Kaira District, Gujarat): An Economic Survey of a Charotar Village, by B.M. Desai, 1967.
11.	11	<b>DHANFULIA:</b> (Junagadh District, Gujarat): Economic Life in a Saurashtra Village by M. D. Desai assisted by V.C.Patel, 1967.
12.	12.	<b>NARGOL:</b> (Bulsar District, Gujarat): Economic Profile of a Fishing Village by P.J. Bambal, 1968.
13.	13.	<b>OON:</b> (Surat District, Gujarat): A Village on the Periphery of an Industrial Estate, by N.R. Shah, 1968.
14.	14.	<b>SAHNUSAR:</b> (Sikar District, Rajasthan): A Village Economy in Semi-Arid Region, by Suresh B. Saxena, 1968.
15.	15.	<b>RAMPURA:</b> (Mehsana Dist., Gujarat): Economic Survey of a North Gujarat Village by M. T. Bapat & D. M. Brahmbhatt, 1970.
16.	16.	<b>HARSAWA:</b> (Sikar District, Rajasthan): A Village Economy in Semi-Arid Region, by M.L. Bhat and D.P. Mathur, 1970.
17.	17.	<b>UMEDPUR:</b> (Jalore District, Rajasthan): Economic Profile of a Mahajan Village by K.R. Pichholiya, 1971.

18.	18.	<b>DINGRI</b> : (Udaipur District, Rajasthan): A Village in the Vicinity of a New Rail Link, by S.B. Saxena & A. S. Charan, 1973.
19.	19.	<b>ZAWAR</b> : (Udaipur District, Rajasthan): Village in the Vicinity of Zawar Mines by S.D. Purohit, 1974.
20.	20.	<b>MALPURA</b> : (Jalore District, Rajasthan): A Statistical Profile.
21.	21.	<b>SAMALDEVI</b> : (Panchmahals District, Gujarat): An Economic Survey in a Backward District by D.M. Brahmhatt, 1977.

## F) Village Resurveys

Sr. No.	Report No.	Village Re-Survey Report
1.	1.	<b>ANKODIA</b> (Baroda District, Gujarat): Change in Economic Life of a Tobacco Village by R.M. Patel, 1970.
2.	2.	<b>NAURANGDESHAR</b> (Sriganganagar District, Rajasthan): Impact of Irrigation on a Rajasthan Canal Village by D. M. Brahmhatt, 1974.
3.	3.	<b>JAMBUA</b> (Panchmahals District, Gujarat) : Change in Socio-Economic Life of Tribal Village by V.C. Patel, 1980.
4.	4.	<b>BORSAD</b> , Glimpses of Change and Development in Borsad Taluka Gujarat by R. M. Patel, 1982.

## G) Publications of the Centre

1. "Agricultural Labour in Four Indian Villages", by V. S. Vyas (*Edited*), *Agro-Economic Research Centre*, Sardar Patel University, Vallabh Vidyanagar, 1964, Pp.119.
2. "HASTEDA - Economic Life in a Rajasthan Village", by M. D. Desai; *Agro-Economic Research Centre*, Sardar Patel University, Vallabh Vidyanagar, 1966, Pp 224.
3. "The New Strategy of Agricultural Development in Operation (A Case Study of the Kaira District in Gujarat), by B. M. Desai and M. D. Desai, *Agro-Economic Research Centre*, Sardar Patel University, Vallabh Vidyanagar, Thacker and Co. Ltd., Bombay, 1969, Pp. 148.
4. "Significance of the New Strategy of Agricultural Development for Small Farmers (A cross sectional study of two areas of Gujarat)", by V. S. Vyas, D.S. Tyagi and V.N. Misra, *Agro-Economic Research Centre*, Sardar Patel University, Vallabh Vidyanagar, 1969, Pp. 95.

5. "Conditions of Stability and Growth in Arid Agriculture", by N. S. Jodha and V. S. Vyas, *Agro-Economic Research Centre*, Sardar Patel University, Vallabh Vidyanagar, 1969, Pp. 127.
6. Training Course in Survey Research Methods (Synopsis of Lectures and Workshop Report), 1970.
7. "Some Aspects of Long Term Cooperative Agricultural Finance (A study of two Areas in Gujarat)", *Agro-Economic Research Centre*, Sardar Patel University, Vallabh Vidyanagar, 1971, Pp. 176.
8. "An Assessment of Cooperative Farming Societies in Gujarat and Rajasthan", by K. M. Choudhary; M.T. Bapat; D.P. Gupta; N.R. Shah; K. R. Pichholiya and S.B. Saxena, *Agro-Economic Research Centre*, Sardar Patel University, Vallabh Vidyanagar, December 1972, Pp. 377.
9. 'National Seminar on Drip Irrigation', Oxford & IBH Publishing Co. Pvt. Ltd., 1992, ISBN 81-204-0711-3.
10. "Development Imperatives and Environmental Concerns Sardar Sarovar Project Plan", by Mahesh Pathak (*Edited*), *Agro-Economic Research Centre*, Sardar Patel University, Vallabh Vidyanagar, January 1995, Pp 227.
11. "Review of State Agriculture Policy in Gujarat", by Arun S. Patel, *Agro-Economic Research Centre*, Sardar Patel University, Vallabh Vidyanagar, 2006, Pp 110.
12. Review of State Agriculture Policy in Rajasthan; by Dilip Bagchi, *Agro-Economic Research Centre*, Sardar Patel University, Vallabh Vidyanagar, 2006, Pp 106.

#### **Publications in Gujarati**

1. *Sanklit Gramvikas* (Overall Village Development), 1980.
  2. "*Ghatak Kaksha Aayojan, Thasara Taluka, Kheda Zilla*", 1989, by M.T. Pathak and N.R. Shah.
  3. "*Gujaratma Khetvishyak Utpadan Kharchana Vartman Valano*" (*Gujarati*), 1979, by A.S. Patel and H.F. Patel (Research Study No. 83, translated by K.A. Patel).
  4. "*Narmada Yojana Vistarni Arthik-Samajik Mojani (Ahmedabad Jilla)*" 1985.
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## **H) Seminars, Conferences, Workshop organized:**

The Seminars, Conferences, Workshops and Training Programmes were organized by the Agro-Economic Research Centre (*jointly with Department of Economics*) during the past four decades:

1. 24th All-India Agricultural Economics Conference (Indian Society of Agricultural Economics), December, 1964 (Proceedings Published).
2. Short-Term Farm Management Training Course for Western India, 1964.
3. All-India Seminar on 'Fixation of Support Prices for Food grains', October, 1965 (Proceedings Published).
4. All-India Seminar on 'Role of Commercial Banks and Co-operatives in Financing Agricultural Production', January, 1968 (Proceedings Published).
5. All-India Seminar on 'Taxation of Agricultural Land and Income', March, 1969 (Proceedings Published).
6. All-India Training Course in Survey Research Methods, October, 1969.
7. Regional Seminar on 'Problems of Educated Youth in Gujarat', March, 1970.
8. All-India Seminar on 'Farm Mechanization' in collaboration with the Indian Society of Agricultural Economics, July, 1970 (Proceedings Published).
9. Third Gujarat Economic Conference (Gujarat Economic Association), October, 1971 (Proceedings Published).
10. All-India Seminar on 'Development of Backward Regions - Problems and Prospects', October, 1972 (Proceedings Published).
11. Regional Seminar on 'Development of Kadana Command Area in Gujarat', November 1976 (Proceedings Published).
12. All-India Seminar on 'Crop Insurance in India', in collaboration with the Indian Society of Agricultural Economics, February, 1981 (Proceedings Published).
13. Technical Workshop on Inter-Regional Variations in Agricultural Development in Gujarat, April, 1983 (jointly with the Govt. of Guj).
14. The 15<sup>th</sup> Gujarat Economic Conference (Gujarat Economic Association), February, 1985.
15. The 45<sup>th</sup> All India Agricultural Economics Conference (Indian Society of Agricultural Economics), December, 1985.

16. Seminar on 'Environmental Issues of the Sardar Sarovar Project', October, 1988.
  17. Seminar on 'Fertilizer Consumption in Gujarat', July, 1989.
  18. Seminar on the 'Problems of Agricultural Terms of Trade & Subsidies', October, 1989.
  19. Seminar on 'Major Issues of Sardar Sarovar Project', March, 1990.
  20. National Seminar on 'Drip Irrigation', organized by Indian Petrochemicals Corporation Ltd., at IPCL, Baroda, and sponsored by Planning Commission, National Committee on the Use of Plastics in Agriculture (NCPA); Sardar Sarovar Narmada Nigam Limited (SSNNL) and AERC, SP University, Vallabh Vidyanagar, on November 28, 1991.
  21. Seminar on 'Sardar Sarovar Project', August, 1992.
  22. The 24<sup>th</sup> Annual Conference of Gujarat Economic Association, May 1994.
  23. Workshop on Problems of Demand and Supply of Edible Oil in Gujarat, August, 2000.
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24. Workshop cum Training Programme for the Technical/Field staff of CCS Gujarat at the Centre during June 30, 2013 and July 1, 2013.
  25. Workshop cum Training Programme for the Technical/Field staff of CCS Gujarat on "Data Collection, Imputing in Worksheet and in Record Types (RTs)" at the Centre during June 30, 2014 and July 1, 2014.
  26. National Workshop on Comprehensive Scheme for Studying the Cost of Cultivation of Principal Crops in India on August 21-22, 2014.
  27. The 28th National Conference on Agricultural Marketing (Indian Society of Agricultural Marketing), December 4-6, 2014, in collaboration with P. G. Department of Economics, S. P. University, Vallabh Vidyanagar, Department of Agricultural Economics, BACA, AAU, Anand; and IABMI, AAU, Anand.
  28. The 45th Annual Conference of Gujarat Economic Association, February 13-15, 2015.
  29. Workshop cum Training Programme on "Field Data Collection and Data Imputing in New Record Types (RTs) & FARMMAP Computer Software", for the Technical/Field staff of CCS, Gujarat at the Centre during June 29, 2015 and July 1, 2015.
  30. Two day National Workshop on AERC Coordinated Research Projects, viz. "Working of Pressurized Irrigation Network Systems (PINS) in India and "Assessment of the Status of Dairying and Potential to Improve Socio Status of the Milk producers and Convergence of all Central and



State Scheme as district level in Selected States of India”, was organized at the Centre during March 10-11, 2016.

31. Two days National Seminar on ‘Scheme for Change in Indian Economy: Need for Continuity and Consistency” jointly organized by N. S. Patel Arts College, Anand and AERC,SPU, VVN during March 18-19, 2016 at N. S. Patel Arts College, Anand.
  32. Workshop cum Training Programme on “Field Data Collection and Data Imputing in New Record Types (RTs) & FARMMAP Computer Software”, for the Technical/Field staff of CCS, Gujarat at the Centre during June 29, 2016 and July 1, 2016.
  33. National Seminar on ‘Water Governance in India: Sustainable Management of Water Resources in Agriculture’ jointly organised with International Water Management Institute (IWMI), Colombo-Anand Office during June 16-17, 2017
  34. National Seminar on ‘Assessment of the Status of Dairying and Potential to Improve Socio-Economic Status of the Milk Producers in India: Special Focus on Eastern States of India’ during May 16-17, 2017
  35. One day workshop on “How to write a Research Paper” for college teachers and students on December 3, 2016 organised jointly with Gujarat Economic Association
  36. Workshop cum Training Programme on “Field Data Collection and Data Imputing in FARMMAP Computer Software”, for the Technical/Field staff of CCS, Gujarat at the Centre during July 1-3, 2017.
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## Annexure II

## Staff Positions sanctioned to the Centre

## A) Sanctioned Positions: AERC

Sr. No.	Name of Post	As mentioned AERC Annual Report 1961-1971					As mentioned in Prof. R. N. Paudwal Committee 1984	As mentioned in Ministry's letter dated 15.05.1985 & Prof Abhijt Sen Committee 2006 &	Prof Abhijt Sen Committee 2006
		1961-62	1962-63	1964-65	1965-66	1970-71			Ministry's letter 22.10.08 (only letter available)
1	Hon. Director*	-	-	-	-	1	1*	-	--
2	Director / Professor	-	-	1	1	-	-	1	1
3	Dy. Director / Associate Professor	1	1	-	-	1	1	1	1
4	Research Officer / Machine Tabulation Unit Officer	1	1	2	3	3	3	4	2
5	Machine Tabulation Unit Officer	-	-	-	-	-	-	-	-
6	Sr. Research Investigator	-	-	-	-	-	6	-	-
7	Jr. Technical Staff	-	-	-	-	-	14	-	-
8	Mech. Tabulation Staff	-	-	-	-	-	4	-	-
9	Sr. Research Assistant/ Statistical Assistant	3	6	6	6	7	-	-	-
10	Research Assistant/ Tabulation Assistant	4	8	8	8	9	-	-	-
11	Research Associate	-	-	-	-	-	-	6	4
12	Research Assistant	-	-	-	-	-	-	-	-
13	Tabulation Assistant	-	-	-	-	-	-	-	-
14	Investigator/Hand Punch Officer	3	8	9	9	9	1	-	-
15	Investigator cum Computer	-	-	-	-	-	-	-	-
16	Hand Punch Operator	-	-	-	-	-	-	-	-
17	Research Fellows* (Temporary)	-	-	-	-	-	-	3	2
18	Res. & Ref. Assistant (Lib.)	-	-	-	-	-	-	1	1
19	Office Assistant	-	-	-	-	1	1	-	-
20	Office Superintendent	-	-	-	-	-	-	1	1
21	Stenographer	1	1	1	1	1	1	-	-
22	P.A. to Director	-	-	-	-	-	-	1	1
23	Accounts Assistant	-	-	-	-	-	-	1	1
24	Assistant /U.D.C	-	-	-	-	-	-	1	-
25	Sr. Clerk/ Typist	1	2	2	2	1	1	-	-
26	Typist *	-	-	-	-	-	-	3	1
27	Peon*	1	2	2	2	2	2	1	-
28	Faras/Sweeper	-	-	-	-	-	-	1	-
29	Chawkidar	-	-	-	-	-	-	1	-
	<b>Total</b>	15	29	31	32	35	35	26	15

Notes: As per Paudwal Committee report, 6 positions of administrative staff is mentioned. \* temporary/adhoc basis.

**B) Sanctioned Positions: CCS**

<b>Sr. No.</b>	<b>Name of Post</b>	<b>Ministry's Letter dated 22.06.1970</b>	<b>Before 2002 (As per mentioned in Ministry's Letter dated 22.02.2006)</b>	<b>Ministry's Letter dated 20.03.2002</b>	<b>Ministry's Letter dated 14.05.2005</b>	<b>Ministry's Letter dated 22.02.2006</b>
1	Hon. Director*	-	-	-	-	-
2	Field Officer	1	1	1	1	1
3	Statistical Assistant/ Assistant Statistician	1	1	1	1	1
4	Field Supervisors	4	8	6	6	6
5	Fieldsmen	44	66	60	60	60
6	Computer	4	8	6	6*	6*
7	Clerk	1	4	-	-	-
8	Typist	1	-	-	-	-
9	Peon	1	1	1	1*	1*
10	Clerk/Typist	-	-	3	3*	3*
	<b>Total</b>	<b>57</b>	<b>89</b>	<b>78</b>	<b>78</b>	<b>78</b>

Note: \* Contractual/adhoc positions, as communicated by the Ministry. As per Minister's letter dated 14.05.2005, post of computer, typist and peon are on adhoc/contractual basis.

**Annexure III****A) List of Retired Staff: AERC**

<b>AERC</b>				
<b>Sr. No.</b>	<b>AERC retired Staff Name</b>	<b>Designation</b>	<b>Date of Joining</b>	<b>Date of Retirement</b>
1	Shri S B Saxena	Investigator Cum Computer	11.02.1971	12.02.1987
2	Shri M. D. Desai	Dy. Director	15.01.1978	31.10.1988
3	Shri G C Machhi	Peon	01.04.1970	31.03.1985
4	Shri R D Sevak	Statistical Asst.	10.03.1971	30.06.1991
5	Shri A D Chauhan	R.A	01.07.1968	09.05.1988
6	Shri J. R. Patel	Office Asst.	01.01.1962	24.09.1988
7	Shri R M Patel	Dy. Director	04.10.1961	31.03.1993
8	Shri M. T Bapat	Research Officer	21.09.1961	30.04.1995
9	Shri K M. Chaudhary	Dy. Director	10.09.1962	30.04.1996
10	Shri D. M. Brahmhatt	Research Officer	12.04.1961	30.05.1996
11	Shri B. C. Patel	Stenographer	01.10.1962	31.03.1997
12	Shri N. R. Shah	Dy. Director	31.12.1963	23.08.1997
13	Shri V M Patel	Sr. Res. Asst.	01.04.1970	31.12.1997
14	Shri S D Purohit	Sr. Res. Asst.	01.08.1965	30.06.1998
15	Shri C S Patel	Office Asst.	01.01.1975	31.12.1999
16	Shri A B. Amodara	Hand Punch Operator	23.08.1972	30.06.2000
17	Shri V G Patel	Sr. Res. Asst.	05.07.1968	31.08.2000
18	Shri M. Roman	Peon	01.06.1962	30.11.2000
19	Shri N. C. Inamadar	Research Asst.	10.12.1963	31.05.2002
20	Shri S R Patel	Research Officer	22.08.1973	31.08.2002
21	Shri B H. Shah	Research Asst.	10.09.1964	30.09.2002
22	Shri H M Verma	Research Asst.	12.08.1968	30.09.2002
23	Shri C F Patel	Research Asst.	10.08.1970	28.02.2003
24	Shri V J Dave	Research Asst.	10.08.1970	31.03.2003
25	Shri R Indu	M. T. Officer	14.08.1971	30.09.2003
26	Mrs. V R Indu	Tabulation Asst.	02.03.1965	28.02.2009
27	Shri N C Purohit	Lib. Asst.	01.02.1972	14.06.2011
28	Shri H A Patel	Peon	01.11.1982	09.08.2007
29	Shri N M Parmar	Stenographer	01.04.1970	14.06.2012
30	Shri B. M. Patel	Office Asst.	18.04.1984	14.06.2013
31	Dr R. H. Patel	Director	03.05.2010	09.11.2011
32	Dr. S O Sharma	Research Associate	08.10.2009	21.11.2011
33	Shri J B Kahar	Hand Punch Operator	27.07.1978	14.06.2014
34	Shri V D Shah	Research Officer	05.07.1973	14.06.2013
35	Dr. (Mrs.) R. A. Dutta	Dy. Director	06.04.1989	14.06.2016

**B) List of Retired Staff: CCS**

<b>Sr. No.</b>	<b>CCS retired Staff Name</b>	<b>Designation</b>	<b>Date of Joining</b>	<b>Date of Retirement</b>
1	Shri N T Patel	Agri. Sup.	10.02.1970	02.11.1979
2	Shri K S Parmar	Peon	01.09.1976	03.07.1982
3	Shri G L Patel	Agri. Asst.	26.03.1980	30.07.1983
4	Shri B M Parmar	Agri. Asst.	30.12.1970	08.06.1984
5	Shri P H. Patel	Agri. Asst.	12.04.1984	19.10.1984
6	Shri S M Shaikh	Agri. Asst.	01.08.1985	04.06.1988
7	Shri Kantibhai J Patel	Agri. Asst.	21.10.1985	31.07.1989
8	Shri R M Panchasara	Agri. Asst.	01.08.1985	15.08.1989
9	Shri H A Vohra	Agri. Asst.	01.08.1985	01.08.1990
10	Shri H J Patel	Agri. Asst.	16.02.1982	30.06.1993
11	Shri K B. Mistry	Field man	25.02.1971	02.10.1993
12	Shri D P Patel	Agri. Asst.	18.02.1986	24.01.1994
13	Shri A D Thakar	S.A.	11.02.1982	04.07.1994
14	Shri V C Patel	R.O.	01.09.1962	27.10.1994
15	Shri K C Shah	Field man	25.06.1975	10.05.1995
16	Shri K J Patel	R.A.A.	06.12.1972	18.05.1996
17	Shri G A Inamdar	Computer	30.12.1970	31.12.1997
18	Shri R C Patel	Agri. Sup.	28.03.1972	31.05.1997
19	Shri P D Naik	Computer	30.12.1970	31.12.1997
20	Shri Ramabhai M. Patel	Agri. Asst.	21.11.1977	06.10.1998
21	Shri P C Patel	Peon	01.04.1985	06.11.1999
22	Shri Bipin A Patel	Agri. Asst.	22.02.1972	29.03.2000
23	Shri U R Singhtyagi	Agri. Sup.	06.05.1970	31.03.2000
24	Shri Jayantilal C. Patel	R.O.	01.09.1971	31.05.2000
25	Shri Shailesh R Patel	Agri. Asst.	01.12.1994	01.04.2001
26	Shri A N Patel	Agri. Asst.	25.02.1971	31.03.2002
27	Shri M S Jaiswal	Agri. Sup.	19.05.1969	31.03.2003
28	Shri A B Parmar	Agri. Asst.	24.11.1975	15.05.2003
29	Shri R M Patel	S.A.	17.05.1969	31.08.2003
30	Shri V S Patel	Agri. Asst.	01.07.1988	27.09.2003
31	Shri N M Sarvaliya	Agri. Asst.	01.02.1971	30.09.2003
32	Shri D R Patel	Computer	25.02.1971	30.06.2004
33	Shri S Y Mohile	Computer	13.01.1971	31.12.2004
34	Shri G R Patel	R.A.A	29.12.1970	30.04.2005
35	Shri P L Parmar	Agri. Asst.	01.07.1977	31.05.2005
36	Shri R V Patel	Agri. Asst.	02.08.1971	31.01.2006
37	Shri C D Patel	Agri. Asst.	04.12.1975	28.02.2006
38	Shri C S Gadhvi	Agri. Asst.	01.07.1986	29.03.2006

39	Shri S J Sharma	Agri. Asst.	26.02.1971	01.04.2006
40	Shri H M Raval	Agri. Asst.	18.01.1971	31.05.2006
41	Shri N M Patel	Agri. Asst.	04.02.1971	30.06.2006
42	Shri Jashbhai C Patel	Agri. Asst.	01.08.1985	30.09.2006
43	Shri B R Saikh	Agri. Asst.	06.11.1973	31.01.2007
44	Shri H.S. Bhoi	Agri. Asst.	28.12.1970	28.02.2007
45	Shri K C Patel	Agri. Asst.	06.11.1973	01.03.2007
46	Shri N D Jagodana	Agri. Asst.	01.03.1972	13.04.2007
47	Shri Bharatbhai A Patel	Agri. Asst.	06.03.1975	30.06.2007
48	Shri F M Vashia	Computer	12.06.1972	31.10.2007
49	Shri D B Parmar (Smt.).	Agri. Asst.	01.04.1985	31.10.2007
50	Shri N B Kanzariya	Agri. Asst.	01.05.1984	23.11.2007
51	Shri Naran V. Patel	Agri. Asst.	18.01.1971	31.03.2008
52	Shri Bholidas M. Patel	Agri. Asst.	26.05.1971	31.03.2008
53	Shri B L Kaila	Agri. Asst.	01.02.1971	30.04.2008
54	Shri V P Patel	Agri. Asst.	25.02.1971	30.04.2008
55	Shri V D Patel	Agri. Asst.	25.02.1971	30.06.2008
56	Shri N P Bhatt	R.A.A.	24.12.1973	30.06.2008
57	Shri S C Shah	R.A.A.	11.12.1972	30.11.2008
58	Shri D T Vanvi	Agri. Asst.	03.05.1971	31.03.2009
59	Shri S B Darji	Computer	25.02.1971	30.06.2009
60	Shri J. E. Parmar	Sr. Clerk	15.03.1969	31.08.2009
61	Shri K S. Raj	Agri. Sup.	01.08.1985	31.10.2009
62	Shri R N Padhiyar	Computer	19.01.1971	31.01.2010
63	Shri A J Rabari	Peon	01.03.2000	02.02.2011
64	Shri B M Variya	Agri. Sup.	01.05.1974	14.06.2011
65	Shri M R Patel	Computer	09.09.1974	14.06.2011
66	Shri C P Patel	Agri. Sup.	25.02.1971	31.10.2011
67	Shri C M Patel	Agri. Sup.	25.02.1971	14.06.2012
68	Shri P M Patel	Agri. Asst.	01.09.1984	14.06.2012
69	Shri Arvind M. Patel	Agri. Sup.	01.09.1984	14.06.2012
70	Shri N V Patel	Agri. Asst.	01.08.1985	31.12.2014
71	Shri B B Chada	Agri. Asst.	23.05.1977	14.06.2015
72	Shri P T Dave	Agri. Asst.	01.03.1978	14.06.2015
73	Shri B. A. Pathak	Jr. Clerk/ Typist	19.04.1984	31.10.2015
74	Shri Atul M. Patel	Jr. Clerk/ Typist	21.09.1989	04.01.2016
75	Shri M. O. Trivedi	Agri. Asst.	12.09.1983	14.06.2016
76	Shri S. I. Patel	Agri. Asst.	01.04.1986	14.06.2016
77	Shri Y. D. Brahmhatt	Agri. Asst.	01.08.1985	31.10.2016
78	Shri J S Raj	Agri. Asst.	15.06.1978	14.06.2017

## Annexure IV

### A) List of Staff Members –AERC (as on July 1, 2017)

Sr. No.	Name	Designation
1	Dr. M. T. Pathak	Hon. Adviser
2	Dr. S. S. Kalamkar	Director/Professor
3	Vacant	Deputy Director/Associate Professor
4	Dr. M. N. Swain	Research Officer/Assistant Professor
5	Dr. Hemant Sharma	Research Officer/Assistant Professor
6	Shri M. R. Ojha	Research Associate
7	Shri M C Makwana	Research Associate
8	Shri Kalpana Kapadia	Research Associate
9	Shri Thansingh Parihar	Research Associate
10	Shri Deep K Patel	Res. & Ref. Asstt. Lib.
11	Mrs. Archita Gupta	Research Fellow*
12	Ms. Rinku Rathod	Research Fellow*
13	Shri D.N. Thakkar	Office Superintendent
14	Shri Vinod D Parmar	P.A. To Director
15	Shri P. J. Patel	Account Assistant
16	Shri N. J. Amin	Jr. Clerk/Typist
17	Shri Sagar Sharma	Research Assistant*
18	Ms. Viral K. Dhobi	Research Assistant*

Note: \* -Adhoc/temporary basis.

### B) List of Staff Members –CCS (as on July 1, 2017)

Sr. No.	Name	Designation
1	Dr. S. S. Kalamkar	Hon. Director
2	Dr S R Bhaiya	Field Officer
3	Shri G S Machhi	Asstt. Statistician
4	Shri R I Patel	Agri. Supervisor
5	Shri B P Pandya	Field Supervisor
6	Shri H P Makwana	Field Supervisor
7	Shri H U Padhiyar	Field Supervisor
8	Shri V C Chudasama	Field Supervisor
9	Shri A B Chaudhary	Field Supervisor
10	Shri B M Solanki	Jr.Clerk/Typ.*
11	Ms. R J Machhi	Jr.Clerk/Typ.*
12	Ms. K H Patel	Jr.Clerk/Typ.*
13	Ms. N J Trivedi	Jr.Clerk/Typ.*
14	Mr. J N Singh	Computer*
15	Mr. F G Vohra	Computer*
16	Mr. R C Mistry	Computer*
17	Ms. B N Patel	Computer*
18	Mr. M R Rana	Computer*
19	Mr. V C Harijan	Peon*
20	Shri J S Raj	Agriculture Assistant
21	Shri P C Patel	Agriculture Assistant
22	Shri C G Baria	Agriculture Assistant
23	Shri G A Patel	Agriculture Assistant
24	Shri A J Sherathiya	Agriculture Assistant
25	Shri L S Vidja	Agriculture Assistant

26	Shri Jashmat D Chauhan	Agriculture Assistant
27	Shri A I Vora	Agriculture Assistant
28	Shri G B Patel	Agriculture Assistant
29	Shri B K Patel	Agriculture Assistant
30	Shri A D Vaghela	Agriculture Assistant
31	Shri J V Patel	Agriculture Assistant
32	Shri Bharat K Patel	Agriculture Assistant
33	Shri H M Pandya	Agriculture Assistant
34	Shri D G Patel	Agriculture Assistant
35	Shri M N Singala	Agriculture Assistant
36	Shri S R Chaudhary	Agriculture Assistant
37	Shri J K Patel	Agriculture Assistant
38	Shri S B Parmar	Agriculture Assistant
39	Shri J N Patel	Agriculture Assistant
40	Shri S C Padhiyar	Agriculture Assistant
41	Shri A K Mistry	Agriculture Assistant
42	Shri S A Panchal	Agriculture Assistant
43	Shri K J Bhoraniya	Agriculture Assistant
44	Shri Juvansinh D Chauhan	Agriculture Assistant
45	Shri D D Vanvi	Field Man
46	Shri P M Makwana	Field Man
47	Shri M S Parmar	Field Man
48	Shri S C Bhoi	Field Man
49	Shri K M Baldha	Field Man
50	Shri H B Patel	Field Man
51	Shri P S Patel	Field Man
52	Shri S C Machhi	Field Man
53	Shri H D Bhoi	Field Man
54	Shri D S Vaghela	Field Man
55	Shri A P Rabadia	Field Man
56	Shri A B Prajapaati	Field Man
57	Shri V H Chaudhary	Field Man
58	Shri R B Patel	Field Man
59	Shri B M Patel	Field Man
60	Shri B B Mobh	Field Man
61	Shri T P Parekh	Field Man
62	Shri Nirav P Patel	Field Man
63	Shri B R Patel	Field Man
64	Shri J J Patel	Field Man
65	Shri R S Machhi	Field Man
66	Shri L C Dabhi	Field Man
67	Shri S J Sharma	Field Man
68	Shri P D Velari	Field Man
69	Shri K G Parmar	Field Man
70	Shri V B Bhoi	Field Man
71	Shri V C Rathava	Field Man
72	Shri M R Parmar	Field Man
73	Shri S H Karamata	Field Man
74	Shri S V Bhoi	Field Man
75	Shri N P Parmar	Field Man
76	Shri K P Tadv	Field Man
77	Shri U M Nai	Field Man
78	Shri Amitkumar Pandya	Research Assistant*

Note: \* -Adhoc/temporary basis.



## Annexure V

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### AERC at a Glance

- Established on July 1, 1961 at Sardar Patel University, VVN by DES, MOA. GOI.
  - Jurisdiction: Gujarat and Rajasthan state
  - Founder Director: Dr. V. S. Vyas
  - Sanctioned Staff Strength: 15 (as per revival of staff pattern done in Oct 2008)
  - Research Studies Completed for MOA, GOI: 172
  - Research Studies Completed for Planning Commission, GOI: 04
  - Village Surveys conducted: 21
  - Village Resurveys conducted: 04
  - Research Studies in Progress: 03
  - Publications of the Centre: 11 (English) and 04 (Gujarati)
  - Seminars/Conferences/Workshops Organized: 36
  - Academic Activities:
    - Research Studies
    - AERC Foundation Day Lecture Series
    - Invited Guest Lecture/Talk Series
    - H.M. Patel Memorial Lecture Series
    - IWMI AERC Seminar Series
    - Faculty Seminar Series
    - Working Paper Series
    - Guidance to Ph.D. Student
    - Organization of Conferences/Seminar/Workshop
    - Training Programme for Ph.D. Student & University/College teachers
  - Award/Prize
    - Dr. V. S. Vyas Felicitation Prize
-

## **CCS at a Glance**

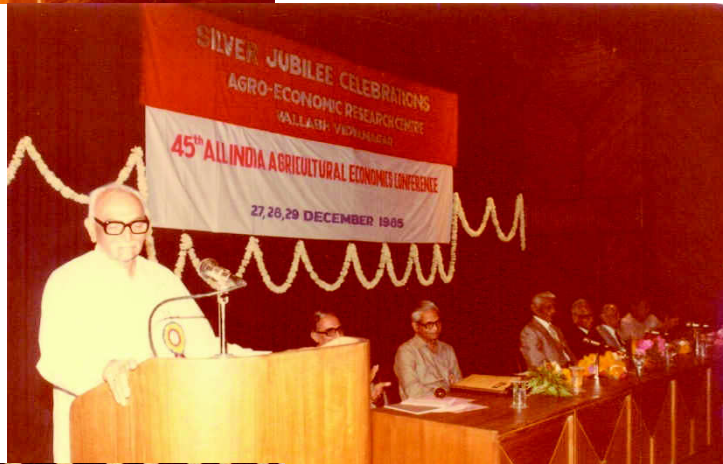
- CCS, Gujarat was established in 1970-71 at SPU, VVN by DES, MOA. GOI.
  - The University entrusted this Scheme to the AERC.
  - Jurisdiction: Gujarat State
  - Total Sanctioned Staff Strength: 78
  - Selection of Sample Villages: Stratified Random Sampling
  - Total No. of Agro-Climatic Zones covered in Sampling: 08 (All)
  - Total No. of Selected Sample Talukas : 60
  - Total No. of Selected Sample Villages/ Village Clusters: 60
  - Total No. of Selected Farmers: 600
  - Classified all the operational holdings into 5 pre-fix farm size classes
  - Selected 2 sample holdings From each farm size class
  - Data Collection: Crop Complex Approach with Cost Accounting Method
  - No. of Selected Study Crops: Total 16 crops, viz. Bajra, Maize, Ragi, Wheat, Tur, Moong, Urad, Gram, Groundnut, Sesamum, Rapeseed Mustard, Cotton and Sugarcane, Onion, Potato (16 crops)
  - Block Year under Progress: 2017-2020
  - Activities:
    - Workshop cum Training Programme for Field staff
    - Standing Administrative Affairs Committee (SAAC)
    - Best Fieldman/Agriculture Assistant' Award
-

***Glimpses of AERC VVN- Silver Jubilee Celebrations***  
The 45<sup>th</sup> All India Agricultural Economics Conference, December, 1985



Dr. Mahesh Pathak  
welcoming the delegates

Dr. H. M. Patel addressing  
the delegates



Dr. Mahesh Pathak,  
Dr. Nilakanth Rath and  
Dr. H. M. Patel on the dias

Dr. V.K. R.V. Rao,  
Dr. M. L. Dantwala, and  
Dr. V. Kurien on the dias

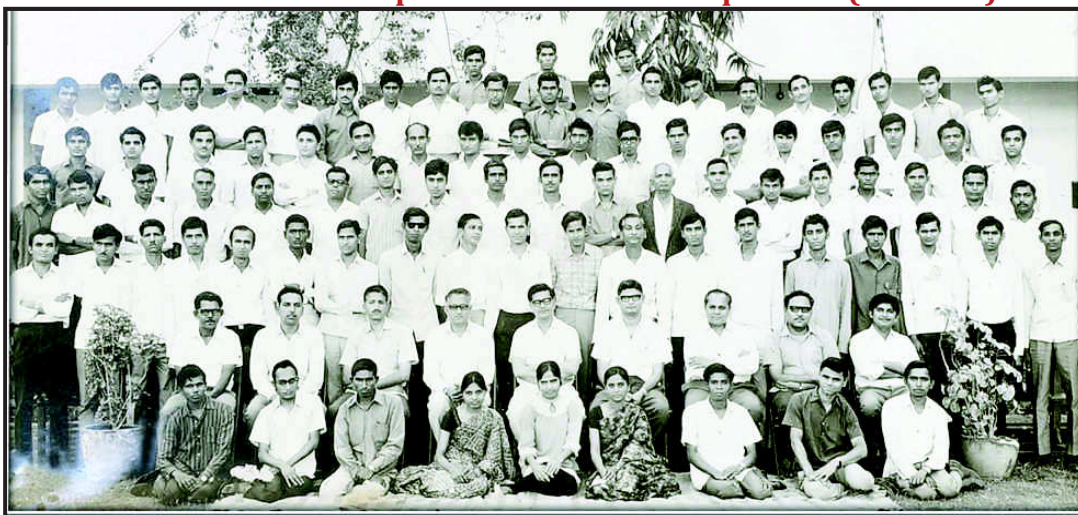


## Training Course in Survey Research Method October 13-26, 1969



- In chair (L to R)** : D.S. Tyagi, R.M. Patel, Dr. M.T. Pathak, Dr. V. S. Vyas, M.D. Desai, Dr. N. S. Jodha, K.M. Choudhary, K.K. Mohan Sarvashree
- Standing 1st Row (L to R)** : V. R. Kapadia, V. Rengarajan, Rajander Kishore, M. Chakraverty, V.C. Patel, R. Pattnaik, P.C. Shukla, J.S. Sisodia, K.R. Pichholiya
- Standing 2nd Row (L to R)** : A.K. Borah, R.S. Chauhan, R.B. Patel, B.H. Shah, H.G. Goswami, D. Saikia, Suresh B. Saxena, D.P. Gupta.
- Standing 3rd Row (L to R)** : B.J. Bhandutia, R. Rajagopalan, S.D. Purohit, Surendra B. Saxena, Guru Din, M.T. Bapat, S.K. Dubey.

## Group Photo of the Staff taken on the Occasion of Send Off to the Fieldsmen of the Centre before departure for field headquarters (1970-71)



- Sitting Ground** : R.N. Padhiyar, G.R. Shah, H.S. Bhoi, Miss H.S. Patel, Miss V.B. Patel, Miss V.P. Patel, G.R. Patel, S.Y. Mohile, V.P. Patel
- Sitting in Chair (L to R)** : Shri K. K. Mohan, Shri D. S. Tyagi, Dr. N. S. Jodha, Shri S. P. Seetna Raman, Dr. V. S. Vyas, Shri M.D. Desai, Shri R. M. Patel, Shri K.M. Choudhary, Shri V.S. Dharap
- Standing 1st Row (L to R)** : R.M. Patel, J.C. Patel, N.M. Patel, G.R. Babariya, R.J. Tilani, T.A. Rupani, K.R. Pichholiya, T.R. Patel, N.R. Shah, S.L. Bapan, J.B. Bissa, J.R. Patel, D.R. Patel, N.M. Sarvaliya, B.I. Patel, B.K. Patel, J.N. Patal, C.F. Patel, M. I. Parmar.
- Standing 2nd Row (L to R)** : N.V. Patel, G.A. Inamdar, B.M. Parmar, M.A. Shah, D.P. Gupta, B.C. Patel, M.S. Charan, R.M. Thakkar, V.J. Dave, A.D. Chauhan, B.H. Shah, A.M. Barot, Jhon E. Parmar, H.F. Patel, S.J. Sharma, V.D. Patel, R.S. Patel, V.M. Patel, M.G. Macchi
- Standing 3rd Row (L to R)** : R.C. Karnavat, H.M. Raval, K.D. Upadhyay, H.P. Bhatt, B.D. Naik, M.D. Patel, V.G. Patel, J.M. Rathod, R.V. Patel, A.B. Bhil, M.S. Jaiswal, S.B. Darji, U. R. Singh, B.L. Kaila, S.P. Gabani, D.H. Choudhary, N.T. Patel, R.D. Sevak.
- Standing 4th Row (L to R)** : K.N. Barot, V.L. Wagh, M.K. Bhatt, B.R. Shekh, P.D. Naik, D.M. Brahmabhatt, N.M. Parmar, K.M. Mistry, V.D. Vamja, K.B. Mistry, K.M. Parmar, C.M. Patel, P.D. Chhatrola, C.P. Patel, A.N. Patel, M.T. Bapat, T.A. Thomas, N.N. Pandya, B.B. Taviya, S.H. Shah
- Standing 5th Row (L to R)** : K.S. Parmar, Joseph Roman, Michael Roman



**Group Photo of AERC and CCS Staff taken on January 28, 2013**



**In Chair (L-R) :-** Ms. B. S. Padhiyar, Dr. M. Swain, Shri V. D. Shah, Dr. S. S. Kalamkar (Director), Dr. B. S. Bhandari (Adviser, Min. of Agriculture, GOI), Dr. Mahesh Pathak (Hon. Advisor), Dr. (Mrs.) R. A. Dutta, Dr. S. R. Bhaiya, Shri D. N. Thakkar, Shri V. D. Parmar.  
**Standing 1st Row (L-R) :-** Shri D. K. Panchal, Shri V. C. Harijan, Shri G. S. Machhi, Shri P. J. Patel, Shri R. C. Mistry, Shri J. N. Singh, Shri B. P. Pandya, Shri R. I. Patel, Shri M. C. Makwana, Shri T. B. Parithar, Shri B. A. Pathak, Shri B. M. Solanki, Shri N. J. Amin, Shri K. T. Raval.  
**Standing 2nd Row (L-R) :-** Shri M. S. Patel, Shri F. G. Vohra, Shri Manish Ojha, Shri H. P. Parmar, Shri D. K. Patel, Shri M. R. Rana, Shri H. P. Makwana.

**CCS Staff Training Programme- June 30, 2014**



**Sitting (L) to (R):** Shri A.D.Vaghela, Shri J. S. Raj, Ms. B.S. Padhiyar, Shri R. I. Patel, Dr. S. R. Bhaiya, Dr. S. S. Kalamkar, Dr. T. K. Dutta (MOA, GOI), Shri Chander Kant (MOA, GOI), Shri G. S. Machhi, Shri H. U. Padhiyar, Shri M. P. Makwana, Shri B. P. Pandya, Shri V. D. Parmar.

**First Row Standing (L) to (R):** Shri A. D. Vaghela, Shri H. M. Pandya, Shri B. I. Prajapati, Shri Girish Patel, Shri N. M. Singhada, Shri D.D.Vanvi, Shri A. M. Patel, Shri M. O. Trivedi, Shri H. D. Bhoi, Shri B. M. Solanki, Shri L. S. Vidja, Shri M.R. Rana, Shri A. K. Mistry, Shri J. M. Patel, Shri P. T. Dave, Shri B. B. Chavda, Shri S. C. Padhiyar, Shri D. K. Panchal and Shri K. T. Raval.

**Second Row Standing (L) to (R):** Shri Arvind Solanki; Shri Mahesh Parmar; Shri J. D. Chauhan; Shri B.A. Pathak; Shri S. R. Chaudhary; Shri B. M. Patel; Shri Rajni Patel; Shri Jigar Patel; Shri B. B. Mobh; Shri M. S. Patel; Shri F. G. Vohara, Shri R. C. Mistry; Shri S. I. Patel; Shri A. J. Sherathiya; Shri Y. D. Brahmbhatt; Shri B. K. Patel; Shri Jagdish Chavda and Shri Pankaj Parmar.

**Third Row Standing (L) to (R):** Shri N. P. Patel; Shri S. C. Bhoi; Shri S. C. Machhi; Shri J. V. Patel; Shri A. P. Rabadiya; Shri V. H. Chaudhary; Shri J. G. Parmar; Shri A. B. Prajapati; Shri J. N. Singh; Shri K. J. Bhoraniya; Shri P. C. Patel; Shri J. K. Patel; Shri C. G. Bariya; Shri D. G. Patel; Shri S. B. Parmar; Shri N. V. Patel and Shri V. C. Harijan.

**Fourth Row Standing (L) to (R):** Shri B. R. Patel; Shri P.M Makwana, Shri T. P. Parekh, Shri H. B. Patel, Shri K.M. Baldha, Shri B. K. Patel, Shri P. S. Patel, Shri A. I. Vohra, and Shri G.A. Patel.

## Distinguished Personalities Associated with the Centre

The AERC, Vallabh Vidyanagar was singularly fortunate to have Dr. V. S. Vyas as its founder Director, whose pioneering efforts, has established rich traditions of research in agricultural economics. This tradition was nurtured in the subsequent phase of three and half decades by Dr. Mahesh Pathak who served as Hon. Director during 1972-2006.

Another unique strength of the Centre has been the association of some of the most distinguished personalities of our Country, such as

- |                                  |                          |
|----------------------------------|--------------------------|
| • Shri H. M. Patel (ICS retired) | • Shri Mahesh Desai      |
| • Prof. M. L. Dantwala           | • Dr. N. S. Jodha        |
| • Dr. D. T. Lakdawala            | • Dr. V. N. Misra        |
| • Prof. M. V. Mathur             | • Dr. S.L. Bapna         |
| • Dr. Amrita Patel               | • Dr. D. S. Tyagi        |
| • Prof. R. K. Amin               | • Dr. B. M. Desai        |
| • Dr. V. S. Vyas                 | • Dr. Arun S. Patel      |
| • Dr. Y. K. Alagh                | • Dr. H. G. Patel        |
| • Dr. Mahesh Pathak              | • Dr. Dilip Bagchi       |
| • Dr. Tushaar Shah               | • Dr. Sudarashan Iyenger |
| • Prof. Ramesh Chand             | • Dr. S. S. Acharya      |
| • Prof. R. S. Deshpande          | • Dr. Amita Shah         |
| • Dr. Ashok Dalwai               | • Dr. Surjit Singh       |
| • Dr. Sangeeta Verma             | • Dr. P. K. Singh        |
| • Shri J. S. Sarma               | • Dr. H. P. Trivedi      |
| • Dr. M. S. Bhatia               | • Dr. Dilip Chauhan      |

*AERC Staff with Hon. Members of the Governing Body, March 14, 2014*



**Sitting (L) to (R):** Shri V. D. Parmar, Shri D. J. Chauhan, Dr. Mahesh Pathak, Dr. V. S. Vyas, Dr. Sudarshan Iyengar, Dr. Harish Padh, Dr. B. S. Bhandari, Dr. S. S. Kalamkar, Dr. S. R. Bhaiya, Dr. M. Swain and Shri D. N. Thakkar.  
**First Row Standing (L) to (R):** Ms. K.M. Kapadia, Ms. B. S. Padhiyar, Shri A. M. Patel, Shri N. J. Amin, Shri P. J. Patel, Shri M. S. Patel, Shri M. R. Rana, Shri H. U. Padhiyar, Shri R. I. Patel, Shri M. O. Ojha, Shri D. K. Patel, Shri H. P. Makwana, Shri B. P. Pandya, Shri G. S. Machhi, Shri B. B. Chavda, Shri D. K. Panchal, Shri K. T. Raval and Shri V. C. Harijan.  
**Second Row Standing (L) to (R):** Shri F. G. Vohra, Shri B. M. Solanki, Shri N. G. Chauhan, Shri J. N. Singh, Shri T. B. Parihar, Shri R. C. Mistry, Shri B. A. Pathak, Shri H. P. Parmar, Shri Jagdish Chavda, Shri B. I. Prajapati and Shri M. C. Makwana.



# Golden Memories

Glimpses of the Inugural Function of H. M. Patel Institute of Rural Development at the hands of Shri Narendra Modi, the then Chief Minister, Government of Gujarat, on December 25, 2001

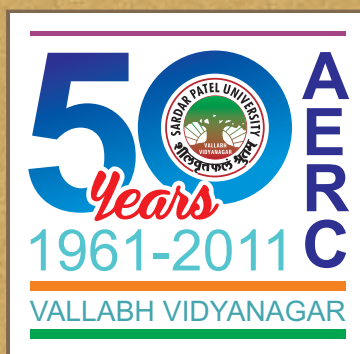


**Hon. Chief Minister Shri Narendra Modi arrives for inauguration**



**Hon. Chief Minister Shri Narendra Modi and Dr. Mahesh Pathak lighting the lamp**





## **Agro-Economic Research Centre**

For the States of Gujarat and Rajasthan  
(Ministry of Agriculture & Farmers Welfare, Govt. of India)  
H.M. Patel Institute of Rural Development  
Opp. Nanadalaya Temple, Post Box No. 24

## **Sardar Patel University**

**Vallabh Vidyanagar 388120, Dist. Anand, Gujarat**  
Ph. No. +91-2692-230106, 230799; Fax- +91-2692-233106  
Email: [director.aerc@gmail.com](mailto:director.aerc@gmail.com); [directoraercgujarat@gmail.com](mailto:directoraercgujarat@gmail.com)  
Websites: [www.aercspu.ac.in](http://www.aercspu.ac.in); [www.spuvvn.edu](http://www.spuvvn.edu)