

EVALUATION STUDY SERIES HIMACHAL PRADESH RO No.5

**EVALUATION STUDY OF AGRI-CLINICS
AND AGRI-BUSINESS CENTRES
(ACABC) IN HIMACHAL PRADESH**

NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT
HIMACHAL PRADESH REGIONAL OFFICE, SHIMLA

2010

FOREWORD

Agriculture is a way of life and a tradition, which for many centuries has shaped thoughts, outlook, culture and the economic life of Indians. Public research and extension activities during the green revolution period played a pivotal role in transforming agriculture from subsistence farming. In the post-green revolution era, public extension found itself unable to meet changing demands of farming community. In view of this, the then finance minister Government of India on February 28, 2001 announced a scheme for Agri-clinic and Agri-business Centres. The scheme of 'Agri-clinics and Agri-business Centers' was launched on 9th April, 2002 to strengthen the transfer of technology and extension services and also provide self –employment opportunities to technically trained persons.

In order to assess the performance of units established under the scheme, the present study was conducted in Mandi district. The study found out that though, the objective of technology transfer has been met to some extent, yet there is a need to involve private extension staff in the entire production, processing, transporting and marketing chain. Further, to ensure long-term viability and sustainability of the agripreneurs, the banks may engage them as Business Facilitators and use their technical/advisory services for identification of prospective borrowers and appraisal of loan applications. Further, the agripreneurs may think of charging some nominal amounts for the extension services which may gradually be hiked based on the response of the farmers.

I hope the findings of the study will be useful to developmental agencies, banks and research institutions.

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BASIC DATA

Sample	Particulars	
District	Mandi	
Sample Units		
Input Supply (sale of fertilizers, insecticides, pesticides, seeds, etc)	5	
Tractors	6	
Poultry units	4	
Dairy units	3	
Poly-houses	2	
Benefits		
Employment Generated	(a) 32890 mandays per annum (b) 236 mandays per lakh of investment	
Financial Viability	FRR(%)	BC Ratio
Input Supply (sale of fertilizers, insecticides, pesticides, seeds, etc)	>50	1.11
Tractors	22.68	1.09
Poultry units	18.87	1.01
Dairy units	19.66	1.03
Poly-houses	15.25	1.01

Executive Summary

Overview

In India, rapid agricultural growth continues to be the key to poverty alleviation and overall economic development. In future, the increase in agricultural production will mainly come from the growth in productivity which will invite intervention of agricultural extension activities in providing farmers information, training and support for adopting improved production technologies. In order to strengthen the extension services provided to the farmers and at the same time tap the potential of these unemployed graduates, the Union Finance Minister had announced in the Budget speech on February 28, 2001, a scheme for setting-up 'Agri-Clinics and Agri-Business Centers' by agriculture graduates with the support of National Bank for Agriculture and Rural Development (NABARD). The scheme of 'Agri-clinics and Agri-business Centers' was launched on 9th April, 2002 to strengthen the transfer of technology and extension services and also provide self –employment opportunities to technically trained persons.

In order to assess the performance of units established under the scheme, the present study was conducted in Mandi district. Out of the 32 units financed under the scheme, 20 units were included in the sample for detailed analysis. The units were categorized into five broad heads on the basis of the activities undertaken. These groups were Agri Business Units (sale of fertilizers, insecticides, pesticides, seeds, etc.), tractors, poultry units, dairy units and poly-houses. Due representation was given to each group in the sample. Further, in order to study the views of the farmers on benefits accruing from these units, 5 farmers per agripreneur were contacted and their views on importance, need and benefits accruing from the sample units were elicited.

Main Findings

➤ Despite facing stiff competition from other similar units (with owners having non-agriculture education background), the agripreneurs were able to attract farmers due to good quality inputs, expert advice to farmers regarding proper use of inputs and free consultancy services (which included repeated visits to the farmers' fields).

- The agripreneurs having poultry units were instrumental in creating awareness among the local people/farmers about various husbandry practices in poultry farming. The agripreneurs organized awareness camps for this purpose, free of cost, through farmer clubs and SHGs.
- The agripreneurs who had set up dairy units were also carrying out milk processing and marketing apart from milk production. The extension efforts of the agripreneurs culminated in better awareness about the dairy practices, feed & fodder management and better production & price realization.
- The agripreneurs were of the view that the agribusiness centers (input suppliers) have been successful in imparting knowledge to the farmers on the new and scientific methods of farming, thus leading to an increase in the production per hectare and the farm income. In case of other type of agripreneurs also, timely advice on production technology, income enhancement, reduction in production cost and increase in productivity are reported to be the major benefits.
- Apart from providing employment to agriculture graduates, the ventures set up by them have helped in providing gainful employment, both direct and indirect, to several people, depending on the nature of enterprise. On an average about 3 persons were employed under each enterprise with 80% receiving direct employment.
- All the ventures were found to be financially viable. However, the sensitivity analysis (increasing the cost by 10 per cent) indicated that except agri-business units, all other units slipped to non-viable status. This shows that the units are surviving on narrow profit margins.
- Though, the objective of technology transfer has been met to some extent, yet there is a need to involve private extension staff in the entire production, processing, transporting and marketing chain. The farmers have received very little support in improving the marketing of their produce which needs to be enhanced by providing better market information to the farmers.

➤ Spread of the Scheme: Majority of the projects financed under the scheme in the state were sanctioned by *Oriental Bank of Commerce*. This was on the initiative taken by the management of the bank to promote the scheme as one of the thrust areas for creating gainful employment and supplementing extension efforts of the Government. The scheme, however, did not find favour with other banks in the state. According to the scheme guidelines, up to a loan amount of Rs. 5.00 lakhs, the loans can be secured against hypothecation of assets created and no further security would be necessary. In the absence of any collateral security, the banks are reluctant to finance. However, the operational viability of the ventures set up under scheme should encourage other banks to start financing under the scheme.

Suggestions

- ✓ To ensure long-term viability and sustainability of the agripreneurs, the banks may engage them as Business Facilitators and use their technical/advisory services for identification of prospective borrowers and appraisal of loan applications.
- ✓ The agripreneurs may be given preference over other general candidates for issuance of dealership license for fertilizers, pesticides, insecticides etc.
- ✓ Many agripreneurs desired that a short term module for refresher course may be designed so that the actual field level problems being faced by the agripreneurs can be solved.
- ✓ With the advancement of agriculture and diversification to high value commercial crops, availability of timely and proper advice is gaining importance. Interaction in the field has indicated that some farmers, if not all, are ready to pay charges for the extension services. To start with, the agripreneurs may, thus, think of charging some nominal amounts for the extension services which may gradually be hiked based on the response of the farmers.
- ✓ Activities such as tractors, dairy and poultry have become traditional in nature. The knowledge on their husbandry practices is generally available in the hinterland. As

such, they have become mainly commercial activities. Hence, it is suggested to remove these activities from the list of eligible ventures under the scheme. Further, the assistance (subsidy) to poly-houses may not be of much help in the context of H.P. state where the State Government has started a scheme entitled “Pt. Deen Dayal Upadhyay Kisan Bagwan Samridhi Yojana”, under which 80 per cent subsidy is available to the willing farmers for setting up of poly houses. Thus, assistance to this activity under ACABC scheme may not be encouraged in the state.

CHAPTER-I

INTRODUCTION

1.1 Significant growth in agriculture is pre-requisite for engineering country's economy on fast track. The combined effect of an unabated population growth, improved family income, increasing industrial needs and rising export requirement has been causing drastic changes in the demand pattern for agricultural commodities in the liberalized era. The problem is compounded by the fact that the farm holdings in the country are shrinking in size, production costs are rising, and the resource drain from the farm sector is mounting in recent decades.

1.2 In India, rapid agricultural growth continues to be the key to poverty alleviation and overall economic development. In future, the increase in agricultural production will mainly come from the growth in productivity which will invite intervention of agricultural extension activities in providing farmers information, training and support for adopting improved production technologies.

1.3 It is now widely accepted that sound agricultural development is essential for overall economic progress. Given its range of agro-ecological setting and more than 120 million farmers, agriculture is faced with a great diversity of needs, opportunities and prospects. If it is to respond successfully to the new challenges posed, greater attention will have to be paid to information based technologies and strengthen means of dissemination to transmit the information to farmers.

1.4 In order to strengthen the extension services provided to the farmers and at the same time tap the potential of these unemployed graduates and provide them with employment opportunities by making them entrepreneurs, the Union Finance Minister had announced in the Budget speech on February 28, 2001, a scheme for setting-up 'Agri-Clinics and Agri-Business Centers' by agriculture graduates with the support of National Bank for Agriculture and Rural Development (NABARD). The scheme of 'Agri-clinics and Agri-business Centers' was launched on 9th April, 2002 to strengthen

the transfer of technology and extension services and also provide self –employment opportunities to technically trained persons. The programme was designed to help develop opportunities for private extension, in order to lower the burden on public funding, to offer a wider range of advice in specialist areas than is possible through public extension, and to develop challenging job opportunities for agricultural graduates.

Objective of the Scheme:

- ✓ To supplement the efforts of Government extension system
- ✓ To make available supplementary sources of input supply and services to needy farmers
- ✓ To provide gainful employment to agriculture graduates in new emerging areas in agriculture sector.

1.5 Thus, this programme aims to tap abundant expertise available in the form of large pool of Agriculture Graduates available in the country. Irrespective of whether one is a fresh graduate or not or whether one is currently employed or not, under the scheme one can set up his own Agri-Clinic or Agri-Business Centre(ACABC) and offer services to innumerable farmers.

Status in Himachal Pradesh

1.6 In Himachal Pradesh (H.P.), 32 units have availed subsidy under the scheme. The details of units are presented in Annexure-I. A summary of the same is given in Table 1.1 below:

Table 1.1: Summary of ACABC cases sanctioned in Himachal Pradesh

(as on 31 March 2009)

(Rs. lakh)

S.No.	Bank	No. of cases	TFO (excl. working capital)	Loan Sanctioned	Total Subsidy
1	Oriental Bank of Commerce	31	139.13	165.50	46.37
2	Punjab National Bank	1	5.82	5.00	1.94
Total		32	144.95	170.50	48.31

1.7 A perusal of the table indicates that majority of the units(31) have been financed by Oriental Bank of Commerce, Sundernagar branch in District Mandi and the remaining case has been financed by PNB, branch Anni, District Kullu. It was, thus, felt necessary to study various aspects related with the units assisted under the scheme.

CHAPTER-II

OBJECTIVES AND METHODOLOGY

Objectives

2.1 The study was undertaken with the following specific objectives:

- ◆ to examine the financial viability and sustainability of the units,
- ◆ to elicit the views of farmers on benefits and services accruing from these ventures,
- ◆ to assess the possibility of add-on activities which may be undertaken by the agripreneurs, and
- ◆ to identify any other issues/aspects relevant or incidental to the above.

Study Design

2.2 In the first stage, purposive sampling procedure was followed for the selection of district as 31 units out of total 32 units were set up in Mandi district. Since all the 31 units in Mandi district were assisted by Oriental Bank of Commerce, the same was selected for the study. Further, 29 units were financed during 2007-08 i.e. about one and half year had elapsed since the units came into operation. Thus, 20 units financed during 2007-08 were taken up for detailed study.

2.3 In the next stage, the units were categorized into five broad heads on the basis of the activities undertaken. These groups were Agri Business Units (sale of fertilizers, insecticides, pesticides, seeds, etc.), tractors, poultry units, dairy units and poly-houses. All these units were also doing consultancy work, *albeit* free of cost. The selection of sample units among different groups is as under:

S.No.	Category	Total Units	Sample Units
1	Input Supply (sale of fertilizers, insecticides, pesticides, seeds, etc)	10	5
2	Tractors	8	6
3	Poultry units	5	4
4	Dairy units	4	3
5	Poly-houses	4	2
Total		31	20

Hence, due representation was given to various groups in the sample. 'Pre' and 'Post' approach was used to determine the incremental income.

The Data

2.4 Data were collected from the respondent agripreneurs by holding personal interviews with the help of pre-designed questionnaires. The following aspects were covered for gathering requisite information.

- a) General Information about the project and the beneficiaries
- b) Items of investment
- c) Assessment and Sources of working capital
- c) Level of business generated
- d) Nature and extent of extension services offered and charges collected, if any
- e) Problems encountered and remedial measures

Selection of Farmers

2.5 In order to study the views of the farmers on benefits accruing from these units, 5 farmers per agripreneur were contacted and their views on importance, need and benefits accruing from the agriventures were elicited.

Data Collection

2.6 A structured survey schedule was used to collect detailed data on technical and economic parameters from the sample agripreneurs. Specifically, these included background details of the sample agripreneurs, item-wise cost of investment, recurring expenditure, income, repayment of bank loan, etc. A separate questionnaire was also used to elicit views of the farmers regarding services made available to them, quality of services, fee/charges paid for various types of services and benefits realized.

CHAPTER-III

PROFILE OF SAMPLE BENEFICIARIES AND IMPLEMENTATION ASPECTS

3.1 This chapter briefly describes the profile of the sample agripreneurs/farmers and examines the systems and procedures followed by the financing bank in assisting the agripreneurs.

Profile of Agripreneurs

Socio-economic Background

3.2 All the sample agripreneurs were possessing B.Sc. (Agri) degree from a recognized college/university. Some of the agripreneurs also possessed post graduate degree in agriculture/other disciplines. Out of the total sample of 20 agripreneurs, 02 agripreneurs have joined Government job recently. The units are, however, in working condition. Majority of the sample agripreneurs belong to SC (14) and OBC (2) category. All have farming background.

The details of socio-economic background of the sample farmers (100 no.) are as under:

Socio-Economic Characteristics of Sample Farmers

Characteristic	Category	No. of Farmers	Percentage
I. Land Holding	Marginal(<1 Ha)	12	12
	Small(1-2 Ha)	70	70
	Medium(2-8 Ha)	13	13
	Large(>8 Ha)	5	5
II. Age	Less than 25 yrs	8	8
	Between 26-45 yrs	69	69

	More than 45 yrs	23	23
III. Education	Illiterate	--	--
	Upto Matric	28	28
	Post Matric	72	72
IV. Caste	SC/ST	62	62
	Others	38	38

3.3 A majority of sample farmers possessed small land holdings. About 70 per cent of them were young farmers (between the age of 26 and 45 years). The level of education in the study area was quite high as 72 per cent sample farmers had studied post matriculation. The general awareness about the latest practices concerning agriculture and other related activities was quite appreciable. Most of the farmers belonged to lower strata in the social hierarchy, *albeit* not in economic terms.

Training

3.4 The sample agripreneurs received 2 months training from Indian Society of Agribusiness Professionals (ISAP) at Sundernagar. ISAP is a non-government, non-profit organization incorporated in 2001, under Section 25 of the Indian Companies Act. It is a network of agriculture and allied sector professionals in India and developing countries. There are 219 trained candidates in H.P. Out of this, 67 agri-ventures have been set up. The number of agri-ventures trained by ISAP is 64.

Suitability of the Training Imparted

3.5 The sample agripreneurs felt that the training imparted to them was very useful. They indicated that the training addressed the following issues:

3.6.1 The trainees being technical graduates were not very conversant with the economics of various schemes. The training helped them to understand the economic aspects.

3.6.2 The participants in the training programme became aware of various procedures related to bank finance like preparing project reports, documentation procedure, various concepts like primary security, collateral security etc.

3.6.3 The training helped the entrepreneurs in networking with fellow entrepreneurs and also facilitated them to analyse various constraints to be faced in future. This helped them in better co-ordination among themselves to achieve some common objectives.

3.6.4 The training also provided them a forum to interact with bankers directly and to know more about the facilities being offered by them.

Business Profile of Agripreneurs

Input Supply (Agri Business Centres)

3.7 A total of 10 units had been financed by Oriental Bank of Commerce (OBC) to undertake sale/supply of inputs like seeds, fertilisers, power sprayers, power dusters, knapsack sprayers, etc. Five units were taken up for detailed study under this category. These units had availed bank loan ranging from Rs. 5.00 lakh to Rs. 10.00 lakh. Their annual turnover ranged from Rs.12 lakh to Rs. 100 lakh with an average profit margin of around 10 per cent. Despite facing stiff competition from other similar units (with owners having non-agriculture education background), these units were able to attract farmers due to good quality inputs, providing advise to the farmers regarding proper use of inputs especially fertilisers and pesticides and free consultancy services (which included repeated visits to the farmers' fields).

Tractors

3.8 Eight agripreneurs had purchased tractors along with accessories such as trailer, Mould Board (M.B.) plough, cultivator, thresher, reaper, etc. under the scheme. Six units

were included in the sample. The average loan amount worked out to be Rs. 5.00 lakh. Apart from using the tractors on their own farms, these agripreneurs were also providing custom hiring services. The custom work mainly comprised of renting out tractors to other farmers in the surroundings to enable them to carry out agricultural operations from time to time. The agripreneurs charged rent on the basis of crop and type of operation which varied from Rs.300/- to Rs.400/- per hour. The average use of tractors was observed to be 848 hours per annum.

Poultry

3.9 The bank had financed five units of poultry under the scheme. Four units were taken up for study. All the agripreneurs were rearing broilers. The size of flock ranged from 1000 to 4000 chicks/birds in 3-4 batches depending on the season, comparatively less during the winter season due to high mortality rate and low price in the market. The agripreneurs were instrumental in creating awareness among the local people/farmers about various husbandry practices in poultry farming. The agripreneurs organized awareness camps for this purpose, free of cost, through farmer clubs and SHGs.

Dairy

3.10 Three units were studied for viability and impact analysis. The average herd size was 11 animals (cows/buffaloes). All the units were new units and were assessed to be viable in terms of profit generation. Apart from milk production, two units were also carrying out milk processing and marketing. The marketing function involved collection of milk from local farmers at a pre-specified rate which varied from time to time based on demand and supply conditions. The extension efforts of the agripreneurs culminated in better awareness about the dairy practices, feed & fodder management and better production & price realization.

Poly- Houses

3.11 Four entrepreneurs had set up poly-houses under ACABC scheme. Each of them has taken a loan of Rs.5.00 lakh from the bank. Two of them were taken up for detailed study. The agripreneurs have constructed the poly-houses using Galvanized Iron (G.I.)

pipes, poly sheets, insect nets, foggers, etc. Drip irrigation system has also been installed in the units. The agripreneurs are growing capsicum (yellow and red) in the poly-houses. They harvest 3 flushes of the crop in a year. Initially, the agripreneurs faced difficulty in marketing the products as the colored capsicum does not have acceptability in the local market. However, subsequently they have tied-up in Delhi for marketing their produce. The realized rate varied from Rs.30/- to Rs.60/- per kg.

Implementation Aspects

Adherence to Down Payment (Margin) Norm

3.12 OBC Sundernagar branch had financed 31 cases. Out of this 29 cases involved a bank loan of Rs. 5.00 lakh each whereas in two cases, the bank loan worked out to be Rs.10.00 lakh each. As stipulated in the scheme guidelines, the bank did not insist any margin money for loans upto Rs.5.00 lakh but prescribed 15 percent borrower's contribution for loans exceeding Rs.5.00 lakh.

Period of Repayment

3.13 The period of repayment was 7-8 years with grace period ranging from 6 months to one year based on the income flow. Quarterly equated installments were fixed.

Rate of Interest

3.14 The rate of interest charged by the bank was pegged to the Prime Lending Rate (PLR). It was 12.25 percent at the time of sanction of loans. After reduction in the PLR, the interest charged has also come down to 11 per cent presently.

Security of Loan

3.15 The loans were secured by the hypothecation of assets created for loans upto Rs. 5.00 lakh. However, for loans exceeding Rs. 5.00 lakh, mortgage of land of the borrowers and hypothecation of the assets was undertaken.

Appraisal of Loan Proposals

3.16 The appraisal of loan proposals was carried out on the strength of assessment of income generation from the proposed ventures. The loans were sanctioned on the basis of repaying capacity of the borrowers.

Insurance

3.17 The bank ensured the insurance cover at the time of financing. Renewal of insurance was also done by the bank in most of the cases. Some agripreneurs were not regular in the renewal of the insurance cover. The aversion of such agripreneurs for renewal of insurance was mainly on account of non-acceptance of claims on earlier occasions.

System of Accounting Capital Subsidy

3.18 The capital subsidy received from NABARD has been kept in a Subsidiary Reserve Fund account. Borrower-wise record has been maintained.

Interest Charged

3.19 The interest was being charged on monthly basis in dairy, poultry, tractor and agri-business units. In case of poly-house units, the same was charged on quarterly rests. This is in contravention to the guidelines of not charging interest at monthly or quarterly rests for agriculture and allied activities but linking it to crop seasons. Further, after the receipt of capital subsidy, the interest charging has been restricted to the loan amount net of subsidy.

Time Lag

3.20 There was not much time lag observed in the sanctioning of projects as all projects were sanctioned within 15 days of submission of all requisite documents.

CHAPTER-IV

IMPACT OF INVESTMENT

4.1 This chapter discusses the impact of investment in ACABC units. The impact has been analysed based on the responses gathered from sample agripreneurs and farmers.

Benefits to Farmers

4.2 To evaluate the impact of the ACABC units in providing extension and other services, responses were gathered from agripreneurs as also from the farmers to arrive at a more realistic view point. The same are reproduced below:

Table 4.1 : Response of Agripreneurs regarding Benefits of ACABC (Percentage)

Activity	Improved Cropping Pattern	Cropping Intensity	Increase in cultivated area	Reduction in Production Cost	Income Enhancement	Improved Production Knowledge	Increase in Productivity	Employment generation	Assistance in Marketing
Input Supply*	10	16	-	-	38	35	34	21	12
Tractors*	-	-	38	-	78	15	-	29	-
Poultry units*	-	-	-	43	62	20	61	9	-
Dairy units*	-	-	-	26	37	26	31	18	20
Poly-House*	12	18	-	13	58	37	30	12	-

* along with extension services

4.3 A perusal of the above table reveals that the agribusiness centers (input suppliers) have been successful in imparting knowledge to the farmers on the new and scientific methods of farming, thus leading to an increase in the production per hectare and the farm income. In case of other type of agripreneurs also, timely advice on production

technology, income enhancement, reduction in production cost and increase in productivity are reported to be the major benefits.

Table 4.2 : Response of Farmers regarding Benefits of ACABC (Percentage)

Activity	Increased Productivity	Improved Production Knowledge	Optimum usage of inputs	Timely Plant Protection Measures	Single Window Services	Availability of farm machinery & Implements
Input Supply*	28	45	54	52	78	18
Tractors*	10	32	12	-	-	92
Poultry units*	57	28	46	--	-	-
Dairy units*	42	35	59	--	-	-
Polyhouses*	18	34	--	35	-	-

* along with extension services

4.4 As per the farmers, improved knowledge about production practices in crop husbandry, dairy, poultry, poly-house cultivation, improvement in productivity and optimum use of farm inputs are the major observed benefits. This is more or less in tune with the perception of benefits by the agripreneurs.

4.5 Though, the objective of technology transfer has been met to some extent, yet there is a need to improve extension efforts in the entire production, processing, transporting and marketing chain. The farmers have received very little support in improving the marketing of their produce which needs to be enhanced by providing better market information to the farmers.

Employment Generation

4.6 Apart from supplementing the extension services, employment generation is also one of the key objectives of the scheme. The scheme was launched to provide employment to agriculture graduates passing out every year from the agriculture universities throughout the country.

Table 43: Employment Generation

(man days/year)

Activity	Employment Generated (mandays)
Input Supply	10950
Tractors	5840
Poultry units	5475
Dairy units	5775
Poly-houses	4850

4.7 Apart from providing employment to graduates, the ventures set up by them have helped in providing gainful employment, both direct and indirect, to several people, depending on the nature of enterprise. On an average about 3 persons were employed under each enterprise with 80% receiving direct employment. This created employment opportunities of about 32890 man days per annum from all the enterprises set up with assistance from the scheme in the district. Further, it was noted that nearly 85 percent of the employed were male and the remaining 15 percent were female. Per lakh of investment, the employment generated worked out to be 236 mandays per annum.

CHAPTER-V

FINANCIAL VIABILITY OF INVESTMENT

5.1 An attempt has been made in this chapter to estimate the viability of the sample units. The inputs and outputs are valued at the reference year prices. The Financial Rate of Return (FRR) has been calculated by estimating the flow of benefits against the cost incurred for different unit sizes.

Dairy Units

Gross Income

5.2 The gross income from the dairy units comprised mainly of income from selling milk, manure and milk products. The annual income from milk was arrived at by multiplying the annual milk production with the average milk price received by the dairy owners. The dairy owners were receiving an average price of Rs. 15.00 per litre. The cost of maintenance of the calves was equal to the sale value of the calves. Hence the income from young stock was not considered as a part of the gross income. The gross income is reflected in Table 5.1.

Table 5.1: Gross Income from Dairy (per animal)

Sr. No	Particulars	Value (Rs)
i	Annual Milk Production (ltrs)	2005
ii	Annual Income from milk @ Rs. 15 per ltr	30075
iii	Other Income	4016
iv	Annual Gross Income	34091

Net Income

5.3 The annual net income (Table 5.2) has been calculated by deducting the annual operating cost or the cost of maintenance of animals from the annual gross income. The net annual income per animal amounted to Rs.12899.

Table 5.2 : Annual Net Income per Animal

Sr No	Particulars	Value (Rs)
1	Gross Income	34091
2	Expenses	21182
3	Net Income	12899

Financial Rate of Return

5.4 For the purpose of assessing the financial viability of the investment, FRR and BCR were calculated. The economic life of the animals was taken at 5 years. The results are displayed in the table below:

Table 5.3: Economics of Dairy Units							
(per unit of 11 animals)							
Sr. No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	
1	Capital Cost (Rs. lakh)	5.120					
2	Recurring Cost (Rs. lakh)	2.330	2.330	2.330	2.330	2.330	
	Total Cost(Rs. lakh)	7.450	2.330	2.330	2.330	2.330	
3	Income(Rs. lakh)	3.750	3.750	3.750	3.750	3.750	
4	Net Benefit(Rs. lakh)	-3.700	1.420	1.420	1.420	1.420	
5	DF @ 15 %	0.870	0.756	0.658	0.572	0.497	
6	PWC @ 15 %	6.478	1.762	1.532	1.332	1.158	12.263
7	PWB @ 15 %	3.261	2.836	2.466	2.144	1.864	12.571
8	NPW @ 15 % DF	0.308					
9	BCR	1.025					
10	FRR	19.66%					

5.5 The table shows that rearing of dairy animals by the sample agripreneurs is viable as a business proposition. The Benefit-Cost ratio and the FRR are more than the expected level of 1 and 15 per cent respectively. The impact of consultancy work of agripreneurs could not be quantified. The same is, however, expressed in terms of subjective response in Chapter-IV.

Tractors

5.6 The average use of tractors on the sample agripreneurs farms was observed to be 848 hours. About 75 per cent of the use was reported for custom work. The custom work

consisted of both farm and non-farm operations. FRR has been worked out based on the following assumptions:

- (i) Life of tractor has been considered as 10 years.
- (ii) The investment cost of the tractor is accounted in the zero year of the project.
- (iii) The weighted average of operational and maintenance cost per hour was taken to iron out the differences due to varying hp of tractors with the sample farmers.
- (iv) Full benefit due to the tractor has been taken from the first year itself as the use of tractor has become traditional in the study area.

5.7 Cash flow for tractors is presented in Tables 5.4.

Table 5.4: Financial Viability of Tractors on Sample Farms

Sr. No.	Particulars	Year 0	Year 1	Year 2-9	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1	Capital Cost (Rs. lakh)	5.60										
2	Income (Rs. lakh)											
i	Inflow net of recurring cost (Rs. lakh)	0.00	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44
ii	Salvage value (Rs. lakh)											0.560
	Total income (Rs. lakh)	0.00	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	2.00
3	Net Benefit (Rs. lakh)	-5.60	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	2.00
4	DF @ 15 %		0.87	0.756	0.658	0.572	0.497	0.432	0.376	0.327	0.284	0.247
5	PWC @ 15 %	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	PWB @ 15 %		0.00	1.089	0.947	0.823	0.716	0.623	0.541	0.471	0.409	0.494
7	NPW @ 15 % DF	0.513										
8	BCR	1.092										
9	FRR	22.68%										

5.8 The table shows the financial viability of use of tractors. Apart from the financial viability of the investment *per se*, the farmers in the surrounding area benefited due to availability of custom services at their doorstep. They also received advice from the agripreneurs on crop husbandry practices, latest varieties of seeds and awareness about various Government schemes.

Poultry (Broilers)

5.9 Four units were included in the sample. All of them were rearing boilers. The average size of the flock was around 2000 chicks with highest size during summer and lowest during winter due to high mortality rate and competition from broilers supply from plain areas like Punjab and Haryana. Operational cost and income from broiler rearing on sample farms is presented in Table 5.5 and 5.6.

Table 5.5: Operational Cost of Broilers on Sample Farms

(Amount in Rs./unit)	
Particulars	
Average Unit Size	2000
1. Cost of Day Old Chicks	48250
2. Cost of feed	105000
3. Cost of Veterinary aid/ medicines	10000
4. Cost of litter, maintenance/ labour(hired)	12231
Total Variable Cost	175481
Variable Cost/bird	87.74
1. Depreciation on shed & equipment	3115
2. Interest on fixed capital (@12%)	19125
Total Fixed Cost	22240
Gross Cost	197721
Gross Cost/bird	98.87

Table 5.6: Gross Income from Broilers

Source of Income	Amount (Rs./unit)
1. Sale of Birds	209000
2. Sale of Manure & Gunny Bags	3103
Gross Receipt	212103
Gross Receipt/Bird	106.05

5.10 A perusal of the data given therein indicates that the gross receipt per bird worked out to be around Rs.106 against an expenditure of Rs. 99, thus, leaving a margin of Rs. 7

per bird. The investment was found to be viable as the FRR and BCR were higher than the minimum mark of 15 per cent and 1 respectively (Table5.7).

Table 5.7: Financial Rate of Return from Broilers

Sr. No.	Particulars	Year 1	Year 2	Year 3 to 15
1	Capital Cost	2.500	3.875	
2	Recurring Cost	3.400	5.500	7.909
	Total Cost	5.900	9.375	7.909
3	Income	5.200	7.500	8.480
4	Net Benefit	-0.700	-1.875	0.571
5	NPW @ 15 % DF	0.385		
6	BCR	1.008		
7	FRR	18.87%		

Poly- House

5.11 Two agripreneurs were studied for ascertaining the viability of cultivation under Poly-houses. Both the agripreneurs were cultivating capsicum in the poly-houses. General information and calculation of FRR are given in the following section:

GENERAL INFORMATION :

Command Area :	770.00 sqm per agripreneur
Estimated Cost :	Rs.8.08 lakh
Unit Cost of the Project :	Rs.1050.00 per sqm
Yield of the Capsicum (Kg/sqm)	7.21
Rate of the Capsicum (Rs./Kg)	45
Total Expenditure for capsicum (Rs/sqm)	55
Per Ha Net return under Poly House condition for vegetable crops (Rs./sqm)	269
Yield of the Capsicum (Kg/sqm) in open condition	1.50
Rate of the Capsicum (Rs./Kg) in open condition	15.00
Total Expenditure for capsicum (Rs/sqm) Open condition	9.80
Per Ha Net return under Open condition for vegetable crops (Rs./sqm)	12.70 @/Ha
Incremental return from the Green/Poly Houses Structure (Rs./sqm)	257
Economic life of Green/Poly House Structure	15 Years
Economic life of Drip / Sprinkler system	8 Years (one replacement required)
Economic life of UV Stablised Sheet	5 Years (two replacements required)
Economic life of Source Augmentation Structure	15 Years
POST-DEVELOPMENT TOTAL SURPLUS	2.07
PRE-DEVELOPMENT TOTAL SURPLUS	0.10
NET SURPLUS IN LAKH	1.98

Table 5.8: Economics of Cultivation under Poly-House
(Rs. lakh)

Period (Year)	Capital Cost	O & M Cost	Total Capital Cost	Benefit	Net Benefit
1	8.09	-	8.09	0.49	-7.59
2		0.16	0.16	1.19	1.02
3		0.16	0.16	1.58	1.42
4		0.16	0.16	1.98	1.82
5		0.16	0.16	1.98	1.82
6	1.90	0.16	2.06	1.98	-0.08
7		0.16	0.16	1.98	1.82
8		0.16	0.16	1.98	1.82
9	1.13	0.16	1.29	1.98	0.69
10		0.16	0.16	1.98	1.82
11		0.16	0.16	1.98	1.82
12	1.90	0.16	2.06	1.98	-0.08
13		0.16	0.16	1.98	1.82
14		0.16	0.16	1.98	1.82
15		0.16	0.16	1.98	1.82
NPW of Benefit at DS of 15 %		Rs 9.41			
BC Ratio			1.01		
IRR			15.25%		

5.12 Despite initial hiccups in marketing the produce/price realisation, the agripreneurs have succeeded to tide over the situation due to their sheer determination, market intelligence and personal contacts. They have been able to make the ventures viable as also to encourage others in the surroundings to take up the activity. Incidentally, Government of Himachal Pradesh is running a scheme named “Pt. Deen Dayal Upadhyay Kisan Bagwan Samridhi Yojana” under which 80 per cent subsidy is available for installing poly-house and 50 per cent subsidy for using micro-irrigation. This scheme coupled with the efforts of agripreneurs in popularizing the cultivation of vegetables under protected environment has resulted in establishment of a large number of poly-houses in the vicinity of the agripreneurs.

Agri-Business Centres

5.13 Agri-Business units or the input suppliers are the most important link in the entire chain of agricultural activities. They become all the more important in addressing the issues related to the timely availability of inputs, their quality and proper usage. Compared to the traditional fertilizer/seed sellers, the Agri-Business Centers (ABCs) run by agriculture graduates have proved beneficial not only to themselves but also to the farmers as they have addressed the issues mentioned above. Apart from supplying inputs, the ABCs are also providing custom hiring services. Under this, they rent out pumps, sprayers and dusters to the farmers at a rental ranging from Rs. 40/- to Rs.120/- per day. This saves the poor farmers from the hazards of investment and maintenance of such implements.

Table 5.9: Economics of Agri-Business Units

Sr. No.	Particulars	Year 1	Year 2	Year 3-15
1	Capital Cost	10.540		
2	Recurring Cost			
	Lease Rent (building)	0.270	0.270	0.270
	Labour	0.360	0.360	0.360
	Seeds,fertilisers,pesticides,etc.	7.500	20.000	37.260
	Total Cost	18.670	20.630	37.890
3	Income	22.000	25.000	41.400
4	Net Benefit	3.330	4.370	3.510
5	NPW @ 15 % DF	2.896	3.304	2.308
6	BCR	1.110		
7	FRR	>50%		

Sensitivity Analysis

5.14 In order to assess the vulnerability of various ventures to fluctuations in the cost items, sensitivity analysis was carried by increasing the cost by 10 per cent. The results indicated that except agri-business units, all other units slipped to non-viable status.

Chapter-VI

Problems, Prospects and Way Forward

6.1 The scheme was launched with certain objectives such as supplementing extension efforts of Government, making available supplementary sources of inputs/ services and providing gainful employment to agriculture graduates. This chapter attempts to assess the extent to which these objectives have been achieved.

To Supplement Extension Efforts of Government

6.2 One of the most important objectives of the scheme is to support the existing extension activities of the state governments. During discussion with the state extension agencies, it was reported that the establishment of ACABC units in the field has helped the farmers to receive advisory services regarding production know-how as the state agencies are reeling under staff shortage. Hence, it was observed that the scheme has benefited the overall extension service provided by the government agencies. Though, there is no coordination among the Government agencies and the agripreneurs, yet the scheme has benefited the farmers. Further, most of the farmers reported benefits such as increased productivity, improvement in production knowledge and optimum usage of farm inputs beside other benefits.

To make available Supplementary sources of Inputs and Services

6.3 The second objective of the scheme was to provide the farmers not only with technical knowledge but also good quality seed, farm implements and appropriate guidance. During the discussions with the agripreneurs it was gathered that the farmers have been benefited due to the increased availability of farm inputs and services from the ACABC units. Due to staff crunch, the Government agencies are not in a position to fully meet the demand of the farmers for supply of fertilizers and other inputs. This gap has somewhat reduced as taken care of by the agripreneurs. More importantly, the farmers

also receive proper and timely advice on usage/dosage of inputs, a factor mostly lacking with the Government system. Added to this, the ACABCs also provided custom hiring services such as renting-out of pumps, sprayers, dusters and tractors. The availability of implements on custom hiring (rental) basis is a big advantage to the farmers as it saves them from the drudgery of making large investments in such implements. The maintenance of implements and their operational viability in view of small landholdings are other important issues which weigh in favour of custom services.

To provide Gainful Employment to Agriculture Graduates

6.4 Employment generation is one of the key objectives of the scheme. The scheme was launched to provide employment to agriculture graduates who pass out every year from the agriculture universities. Of the total agriculture graduates in the state, only around 10-20 per cent are absorbed in the service sector and the remaining are left unemployed or under utilized. On an average about four persons were employed under each enterprise with 80% receiving direct employment. This created employment opportunities of about 32890 man days per annum from all the enterprises set up with assistance from the scheme. Further, it was noted that nearly 85 percent of the employed were male and the remaining 15 percent were female.

6.5 Though, the objective of technology transfer has been met to some extent, yet there is a need to involve private extension staff in the entire production, processing, transportation and marketing chain. The farmers have received very little support in improving the marketing of their produce which needs to be enhanced by providing better market information to the farmers.

6.6 Though the agripreneurs claimed to have provided extension services to the farmers in the nearby villages, there was no record of such services. Since the main objective of agripreneurs is to maximize their own welfare, the possibility of exaggeration of their claims cannot be ruled out.

6.7 Factors Affecting success of Agriventures

Following factors have emerged as critical to the success of ACABCs:

6.7.1 *One stop shop for the farmers*: In case of agri-business units, the ventures have proved to be a success because they serve as one stop shop for the farmers. They are not only able to get free of cost advice regarding production, they also have access to the desired inputs like seeds, fertilizers and so on. This kind of multifaceted function has led to the success of the ventures. Forty five per cent of the respondents reported that the single window advisory was one of the most important benefits that they derived from ACABC. Thus, convenience and single window availability of advisory services is one of the factors for the success of ventures.

6.7.2 *Farmers' Organizations*: The availability of organizations like Farmers Clubs and SHGs in the field has provided good fora for the agripreneurs in reaching out to the farmers and propagating the extension services.

6.7.3 *Reliable Information*: the information and knowledge gained during the training is considered to be valuable and is passed on to the farmers. Availability of reliable information has proved to be one of the factors for the success of the enterprise.

6.8 Constraints

6.8.1 **Spread of the Scheme**: Majority of the projects financed under the scheme in the state were sanctioned by *Oriental Bank of Commerce*. This was on the initiative taken by the management of the bank to promote the scheme as one of the thrust areas for creating gainful employment and supplementing extension efforts of the Government. The scheme, however, did not find favour with other banks in the state. According to the scheme guidelines, up to a loan amount of Rs. 5.00 lakhs, the loans can be secured against hypothecation of assets created and no further security would be necessary. In the absence of any collateral security, the banks are reluctant to finance. However, the operational

viability of the ventures set up under scheme should encourage other banks to start financing under the scheme.

6.8.2 It was observed that the profit margins are low and vulnerable to fluctuations in the prices of inputs/cost items.

6.8.3 It was also reported by some of the units that the recurring expenditure in some activities (poultry, agri-business and dairy) are quite high and are limiting factors in managing day to day business of the units. The recurring expenditure estimated at Rs.2.33 lakh (dairy unit of 11 animals), Rs. 7.90 lakh (poultry-broilers with average unit size of 200 chicks) and Rs. 37.89 lakh (agri-business). Only 3 units out of 12 sample units of dairy, agri-business and poultry were availing bank credit for working capital requirements. The unwillingness of the banks to extend credit facility for this purpose was due to their apprehensions about the viability of such units.

6.8.4 It was reported that the PACs hesitate to issue 'No Objection Certificate' to the Agripreneurs for obtaining license for fertilizer sale.

6.8.5 **Selection of Activities:** In the absence of availability of authentic information on the exact needs of the farmers at the field level, the selection of the activity by the agripreneurs is left at their judgment. The choice may not always be as per the requirements of the area/farmers. Thus, the sustainability of the agripreneurs may be jeopardized.

6.9 Suggestions

6.9.1 To ensure long-term viability and sustainability of the agripreneurs, the banks may engage them as Business Facilitators and use their technical/advisory services for identification of prospective borrowers and appraisal of loan applications.

6.9.2 The agripreneurs may be given preference over other general candidates for issuance of dealership license for fertilizers, pesticides, insecticides etc.

6.9.3 Many agripreneurs desired that a short term module for refresher course may be designed so that the actual field level problems being faced by the agripreneurs can be solved.

6.9.4 With the advancement of agriculture and diversification to high value commercial crops, availability of timely and proper advice is gaining importance. Interaction in the field has indicated that some farmers, if not all, are ready to pay charges for the extension services. To start with, the agripreneurs may, thus, think of charging some nominal amounts for the extension services which may gradually be hiked based on the response of the farmers.

6.9.5 Activities such as tractors, dairy and poultry have become traditional in nature. The knowledge on their husbandry practices is generally available in the hinterland. As such, they have become mainly commercial activities. Hence, it is suggested to remove these activities from the list of eligible ventures under the scheme. Further, the assistance (subsidy) to poly-houses may not be of much help in the context of H.P. state where the State Government has started a scheme entitled “Pt. Deen Dayal Upadhyay Kisan Bagwan Yojana”, under which 80 per cent subsidy is available to the willing farmers for setting up of poly houses. Thus, assistance to this activity may not be encouraged in the state.

Chapter-VII

Summary

Overview

- In India, rapid agricultural growth continues to be the key to poverty alleviation and overall economic development. In future, the increase in agricultural production will mainly come from the growth in productivity which will invite intervention of agricultural extension activities in providing farmers information, training and support for adopting improved production technologies.

- In order to strengthen the extension services provided to the farmers and at the same time tap the potential of these unemployed graduates and provide them with employment opportunities by making them entrepreneurs, the Union Finance Minister had announced in the Budget speech on February 28, 2001, a scheme for setting-up 'Agri-Clinics and Agri-Business Centers' by agriculture graduates with the support of National Bank for Agriculture and Rural Development (NABARD). The scheme of 'Agri-clinics and Agri-business Centers' was launched on 9th April, 2002 to strengthen the transfer of technology and extension services and also provide self –employment opportunities to technically trained persons. The programme was designed to help develop opportunities for private extension, in order to lower the burden on public funding, to offer a wider range of advice in specialist areas than is possible through public extension, and to develop challenging job opportunities for agricultural graduates.

- In order to assess the performance of units established under the scheme, the present study was conducted in Mandi district. Out of the 32 units financed under the scheme, 20 units were included in the sample for detailed analysis. The units were categorized into five broad heads on the basis of the activities undertaken. These groups were Agri Business Units (sale of fertilizers, insecticides, pesticides, seeds, etc.), tractors, poultry units, dairy units and poly-houses. Due representation was given to each group in the sample. Further, in order to study the views of the farmers on benefits accruing from these

units, 5 farmers per agripreneur were contacted and their views on importance, need and benefits accruing from the sample units were elicited.

Main Findings

- The sample agripreneurs received 2 months training from Indian Society of Agribusiness Professionals (ISAP). The training helped them to understand the economic aspects of various activities in a better way. The training also helped them in networking with fellow entrepreneurs and also facilitated in analysing the constraints to be faced in future.

- Despite facing stiff competition from other similar units (with owners having non-agriculture education background), the agripreneurs were able to attract farmers due to good quality inputs, providing advise to the farmers regarding proper use of inputs especially fertilisers and pesticides and free consultancy services (which included repeated visits to the farmers' fields).

- The agripreneurs having poultry units were instrumental in creating awareness among the local people/farmers about various husbandry practices in poultry farming. The agripreneurs organized awareness camps for this purpose, free of cost, through farmer clubs and SHGs.

- The agripreneurs who had set up dairy units were also carrying out milk processing and marketing apart from milk production. The extension efforts of the agripreneurs culminated in better awareness about the dairy practices, feed & fodder management and better production & price realization.

- The financing bank adhered to the norms relating to down payment, security, system of accounting capital subsidy, interest charging, etc.

- The agripreneurs were of the view that the agribusiness centers (input suppliers) have been successful in imparting knowledge to the farmers on the new and scientific methods of farming, thus leading to an increase in the production per hectare and the farm income. In case of other type of agripreneurs also, timely advice on production

technology, income enhancement, reduction in production cost and increase in productivity are reported to be the major benefits. The perception of farmers on benefits realized by them was more or less in tune with the views of the agripreneurs.

➤ Apart from providing employment to agriculture graduates, the ventures set up by them have helped in providing gainful employment, both direct and indirect, to several people, depending on the nature of enterprise. On an average about 3 persons were employed under each enterprise with 80% receiving direct employment. This created employment opportunities of about 32890 man days per annum from all the enterprises set up with assistance from the scheme in the district.

➤ All the ventures were found to be financially viable. However, the sensitivity analysis (increasing the cost by 10 per cent) indicated that except agri-business units, all other units slipped to non-viable status. This shows that the units are surviving on narrow profit margins.

➤ Though, the objective of technology transfer has been met to some extent, yet there is a need to involve private extension staff in the entire production, processing, transporting and marketing chain. The farmers have received very little support in improving the marketing of their produce which needs to be enhanced by providing better market information to the farmers.

➤ Spread of the Scheme: Majority of the projects financed under the scheme in the state were sanctioned by *Oriental Bank of Commerce*. This was on the initiative taken by the management of the bank to promote the scheme as one of the thrust areas for creating gainful employment and supplementing extension efforts of the Government. The scheme, however, did not find favour with other banks in the state. According to the scheme guidelines, up to a loan amount of Rs. 5.00 lakhs, the loans can be secured against hypothecation of assets created and no further security would be necessary. In the absence of any collateral security, the banks are reluctant to finance. However, the operational viability of the ventures set up under scheme should encourage other banks to start financing under the scheme.

Suggestions

- To ensure long-term viability and sustainability of the agripreneurs, the banks may engage them as Business Facilitators and use their technical/advisory services for identification of prospective borrowers and appraisal of loan applications.
- The agripreneurs may be given preference over other general candidates for issuance of dealership license for fertilizers, pesticides, insecticides etc.
- Many agripreneurs desired that a short term module for refresher course may be designed so that the actual field level problems being faced by the agripreneurs can be solved.
- With the advancement of agriculture and diversification to high value commercial crops, availability of timely and proper advice is gaining importance. Interaction in the field has indicated that some farmers, if not all, are ready to pay charges for the extension services. To start with, the agripreneurs may, thus, think of charging some nominal amounts for the extension services which may gradually be hiked based on the response of the farmers.
- Activities such as tractors, dairy and poultry have become traditional in nature. The knowledge on their husbandry practices is generally available in the hinterland. As such, they have become mainly commercial activities. Hence, it is suggested to remove these activities from the list of eligible ventures under the scheme. Further, the assistance (subsidy) to poly-houses may not be of much help in the context of H.P. state where the State Government has started a scheme entitled “Pt. Deen Dayal Upadhyay Kisan Bagwan Samridhi Yojana”, under which 80 per cent subsidy is available to the willing farmers for setting up of poly houses. Thus, assistance to this activity under ACABC scheme may not be encouraged in the state.

Annexure-I: Details of Units set up under ACABC in Himachal Pradesh

S.N.	Name & Address of Project	Total Financial Outlay excl. Working Capital(Rs.)	Loan Sanctioned (Rs.)	Items of Investment
1	2	3	4	5
I. Oriental Bank of Commerce, Branch Sundernagar, District Mandi				
1	Shri Akesh Kumar Vill. Dadour	417000	500000	Sprayers, Seed Stock Fertilizers, Pesticides
2	Shri Karam Singh Vill. Dadour	513000	500000	Tractor, Trolley, Plough Blade
3	Shri Suresh Kumar Vill. Katti	513000	500000	Tractor, Trolley, Plough Blade
4	Shri Ramesh Kumar Vill. Dadour	352000	500000	Seed, Fertilizers, Pesticides
5	Shri Suresh Kumar Vill. Kohla	400000	500000	Poultry shed, stock of chicks, Feeds
6	Shri Karam Chand Vill. Tarot	458700	500000	Construction material polyhouse
7	Shri Sanjay Kumar Pal, Vill.Chhatru	458700	500000	Construction material polyhouse
8	Shri Mukesh Kumar Vill.Chandyal	500000	500000	Dairy Shed, Milch Cat Equipments

9	Shri Nikka Ram S/o Vill. Khathyal	458700	500000	Construction material polyhouse
10	Shri Rajender Kumar Vill. Dolakh	458700	500000	Construction material polyhouse
11	Shri Tulsu Ram Vill. Kawalkot	617000	500000	Tractor, Trolley, Thresher, Cultivator
12	Shri Chet Ram Vill. Nalwari	617000	500000	Tractor, Trolley, Thresher, Cultivator
13	Shri Ramesh Kumar Ram, Vill. Harwani,	400000	500000	Poultry shed, stock of chicks, Feeds
14	Shri Amar Singh VPO- Ratti	617000	500000	Tractor, Trolley, Thresher, Cultivator
15	Shri Munish Kumar Rawat Vill. Dolakh	617000	500000	Tractor, Trolley, Thresher, Cultivator
16	Shri Munish Kumar Saini Vill. Chandyal	320000	500000	Stocks of seed of different vegetables
17	Shri Naveen Kumar VPO- Bhangrotu,	617000	500000	Tractor, Trolley, Thresher, Cultivator
18	Shri Ved Prakash Vill. Chhatru	500000	500000	Dairy Shed, Milch Cat Equipments
19	Shri Prakash Chand Vill. Chhatru	500000	500000	Dairy Shed, Milch Cat Equipments
20	Shri Bodh Raj S/o Vill. Lower Behli	400000	500000	Poultry shed, stock of chicks, Feeds

21	Shri Vivek Chandel Vill. Chhatru	425000	500000	Building, Furniture Fixture, Computer Sprayers, Seeds
22	Shri Hukum Chand Vill. Bangot	400000	500000	Poultry shed, stock of chicks, Feeds
23	Shri Anoop Kumar VPO- Slapper	110000	500000	Stock of Seeds, Fertilizers, Pesticides Equipments
24	Shri Harish Kumar VPO- Sainji	110000	500000	Stock of Seeds, Fertilizers, Pesticides Equipments
25	Shri Hem Raj S/o VPO- Sainji	500000	500000	Dairy Shed, Milch Cat Equipments
26	Shri Devinder Thakur Vill. Chaulakha	895000	500000	Poultry shed, stock of chicks, Feeds
27	Shri Gopal Bhardwaj Vill. Dadoh	252000	500000	Furniture Fixture, Sprayers, Seeds stock Fertilizers, Pesticides
28	Shri Deepal Krishan Vill. Karnala	252000	500000	Sprayers, Seeds stock Fertilizers, Pesticides
29	Shri Gulab Singh VPO- Lohara,	534000	500000	Tractor, Trolley, Plough
30	Shri Amar Singh S/o VPO- Lohara	110000	500000	Stock of Seeds, Fertilizers, Pesticides Equipments
31	Shri Sanjay Kumar VPO- Leda	590000	500000	Furniture Fixture, Sprayers, Seeds stock Fertilizers, Pesticides

II. Punjab National Bank, Branch – Anni, District Kullu				
32	ACABC Unit - Shri Naresh Kumar S/o Shri Chaman Lal, Vill.- Bhuni, PO- Dalash, Distt. Kullu	582500	500000	Mushroom Production and Consultancy Services
	Total	13912800	17050000	

**Annexure-II: REPORTS PUBLISHED UNDER THE EVALUATION
STUDY SERIES OF THE NATIONAL
BANK FOR AGRICULTURE AND RURAL DEVELOPMENT**

A. Reports published by the Head Office of NABARD

Sr. No	Title of Evaluation Study Reports	Year of Publication
1	*Minor Irrigation scheme - Construction of New Wells and Installation of Pumpsets thereon in Solapur District, Maharashtra	1977
2	*Minor Irrigation Scheme - Installation of shallow Tubewells in Karnal District, Haryana	1977
3	*Bhadra Land Development Project - Scheme for Reclamation and Development of Land, Karnataka	1977
4	*Land Development under Nagarjuna Sagar Project, Miryalguda Talluka, Andhra Pradesh	1977
5	*Dairy Development Scheme in Jagadhri Block of Ambala District, Haryana	1978
6	*Dairy Development Scheme in Moga Area of Faridkot District, Punjab	1978
7	*Poultry Development Scheme in Mulkanoor, Karimnagar District, Andhra Pradesh	1979
8	*Mechanised Fishing Boats in South Kanara District, Karnataka	1979
9	*Development of Acid Gardens in Nellore District, Andhra Pradesh	1981
10	*Groundwater Irrigation in Kota District, Rajasthan	1982
11	Minor Irrigation in Bhojpur District, Bihar	1982
12	Development of Grape Cultivation in Bijapur District, Karnataka	1982
13	River Lift Irrigation Scheme in Pune District, Maharashtra	1982
14	*Dairy Development Scheme in Western Uttar Pradesh	1982
15	*River Lift Irrigation Scheme in Kolhapur District, Maharashtra	1982
16	Sheep Rearing in Nalgonda District, Andhra Pradesh	1982
17	*Development of Coffee Plantation in Lower Plains Area, Madurai District, Tamil Nadu	1982
18	*Public Tubewells and River Lifts in Orissa	1984
19	Power Tillers in Hooghly District, West Bengal	1985
20	Commercial Poultry in Krishna District, Andhra Pradesh	1986
21	Dugwell Irrigation in Palghat District, Kerala	1986
22	Tractors in North Bihar	1986
23	Dairy Development in Darjeeling District, West Bengal	1987
24	Tractors in Varanasi, Ghazipur and Jaunpur Districts, of Eastern Uttar Pradesh	1987
25	Tractors and Power Tillers in Tamil Nadu	1987
26	Minor Irrigation in Muzaffarnagar District, Uttar Pradesh	1987
27	Dairy Development in Quilon District, Kerala	1987
28	Dugwell Irrigation in Dhenkanal District, Orissa	1988
29	Bamboo and Shallow Tubewells in Purnea District, Bihar	1988
30	Dugwell Irrigation in Nasik District, Maharashtra	1988
31	Calf Rearing in North Arcot, Salem and Coimbatore Districts, Tamil Nadu	1988
32	Minor Irrigation in Allahabad District, Uttar Pradesh	1988

33	Coconut Development in Quilon District, Kerala	1988
34	Minor Irrigation in Purulia District, West Bengal	1988
35	Sprinkler Irrigation in Semi-arid Areas, Rajasthan	1989
36	Dugwell Irrigation in Amravati District, Maharashtra	1989
37	Marine Fisheries in Coastal Gujarat and Maharashtra	1989
38	Financing of Shallow Tubewells under Massive National Programme in Haryana	1989
39	Financing of Apple Orchards in Hill Districts, Uttar Pradesh	1991
40	Work Animals and Animal Driven Carts in Meerut District, Uttar Pradesh	1991
41	Inland Fishery in Krishna District, Andhra Pradesh	1991
42	Bio-Gas Plants in Nainital and Rampur Districts, Uttar Pradesh	1991
43	Impact of NFS Investments	1994
44	Lift Irrigation Schemes in Maharashtra	1995
45	Mandawan Watershed Project Under Indo German Watershed Development Programme-Maharashtra	1999
46	Self Help Groups in Tamil Nadu	2000
47	Micro Finance for Rural People- An Impact Study	2000
48	Non Farm Sector Investments – An Impact assessment	2002
49	SHG - Bank Linkage Programme for Rural Poor in India - An Impact Assessment	2002
50	Cold storage Units Financed Under Capital Investment Subsidy Scheme : An Impact Assessment	2003
51	Infrastructure for Agriculture and Rural Development: An Impact assessment of Investments in Rural Roads & Bridges under RIDF	2004
52	Commodity Specific Study – Grapes	2006
53	Commodity Specific Study – Cotton	2006
54	Commodity Specific Study : Potato	2006

* **Reports are out of stock**

B. Reports Published by Regional Offices of NABARD

Sr. No	Regional Office	Title of Evaluation Report	Published Year
1	AndhraPradesh	Public Tubewells in Khamman District, A P	1988
2		Development of Grape Gardens in Ranga Reddy District, AP	1989
3		Dugwell Irrigation in Chittoor District, AP	1989
4		Mango Orchards in Krishna and Khammam, AP	1991
5		On Farm Development in Khammam&Krishna, AP	1995
6		Inland Fishery in West Godavari, Andhra Pradesh	1996
7		Dairy development in Krishna District, Andhra Pradesh	1999
8		Poultry layer Investment in Andhra Pradesh	2000
9		Food (Mango)Processing in Visakhapatnam and Chittoor districts	2001
10		Sheep Rearing in Mahabubnagar and West Godavari districts	2002
11		Sericulture Investment in Andhra Pradesh	2003
12		Rural Non Farm Sector Investment in AP	2005
13		Microfinance for Microenterprises (SHGs)	2006
14		Mango in Andhra Pradesh – A Commodity Specific Study	2007
15		REDP – An Impact Evaluation	2008
1	Assam	Private Shallow Tubewells & Lift Points in Assam	1989
2		Inland Fishery in West Tripura District, Tripura	1992
3		IRDP in Nagaon district	2000
4		FM (Power tiller) in Sibsagar district	2000
5		Impact of Rural Infrastructure Dev. on Agriculture Production	2007
1	Bihar	Shallow Tubewells in Bihar	1988
2		Deep Tubewells in Bihar	1989
3		Dairy Development in Begusarai & Singhbhumii in Bihar	1989
4		MI Schemes in Samastipur District, Bihar	1996
5		IRDP in Ranchi District on Bihar	1997
6		Cold Storage in Bihar	2004
7		Million Shallow Tubewell Programme in Bihar	2005
1	Chhatisgarh	MI Investments in Chhasttisgarh	2005
2		Impact assessment of RIDF investments in Chhattisgarh	2006
3		Commodity Specific Study – Groundnut	2007
4		Evaluation of REDP – Chhattisgarh	2008
1	Jharkhand	Rural Non Farm Sector Investment	2006
1	Gujarat	Poultry Development Scheme in Gujarat	1988
2		Dairy Development Scheme in Mehasana, Gujarat	1989
3		Lift Irrigation Scheme of Ukai Left Bank Main Canal - Gujarat	1991
4		Financing of Tractors in Mehasana & Rajkot Districts, Gujarat	1992
5		Investments Financed under IRDP in Valsad District, Gujarat	1994
6		Marketyard in Jetpur	2003
7		Marine Fisheries in Junagarh	2003
8		Buffalo Finanacing in Sabarkantha	2004
9		Impact Assessment of Micro Enterprises among SHG Members	2008
10		Commodity Specific Study on Groundnut	2008
1	Himachal Pradesh	Dairy Development in Mandi district	1997
2		Apple cultivation in Himachal Pradesh	2004

3		Rural Roads and Bridges financed under RIDF in Himachal Pradesh	2006
4		Evaluation of Rural Entrepreneurship Development Programme in H.P.	2009
1	Jammu & Kashmir	IRDP in Baramullah District, Jammu & Kashmir	1992
2		Tractors in Jammu District, Jammu & Kashmir	1995
1	Karnataka	Grape Gardens in Bangalore and Kolar Districts, Karnataka	1989
2		Borwell Financing in Chitradurga and Kolar District, Karnataka	1990
3		Development of Coffee Garden in Karnataka	1992
4		Sericulture Development in Mysore& Hassan Districts, Karnataka	1993
5		Lift Irrigation Schemes in Belgaum, Karnataka	2000
6		Poultry Development in Bangalore and Bangalore District	2001
7		Drip Irrigation Programme in Chitra Durga	2002
8		Dairy Development in Kolar and Shimoga district	2003
9		Sericulture in Kolar and Tumkur districts	2003
10		Fuelwood Development Projects in Karnataka	2003
11		Participatory Irrigation Management Institutions in Karnataka	2004
12		Gherkin AEZ - Karnataka - Commodity Specific Study with special Reference to Contract Farming	2005
13		Comparative Cost Models for SHGs – MFI Vs NABARD Model	2007
1	Kerala	Betelvine gardens in Trivandrum District, Kerala	1988
2		Broiler Poultry Development in Ernakulam District, Kerala	1990
3		Development of Rubber Plantation in Kottayam District, Kerala	1991
4		Fisheries Development in Kollam District, Kerala	1992
5		Farm mechanisation in Palakkad and Ernakulam Districts	1995
6		RNFS in Malappuran and Kozikiode Districts, Kerala	1998
7		Sprinkler Irrigation in Arecanut garden in Kasaragod district	2002
8		Dairy development in Kollam district	2002
9		MI in Kasargod and Kannur District in Kerala	2003
10		Rural Non Farm Sector Activities	2004
11		Self Help Group in Waynad district	2004
12		Impact of RIDF Investment - Kerala	2008
13		Commodity Specific Study-Cashew in Kerala	2008
1	Madhya Pradesh	Dugwell and Shallow Tubewell Irrigation in Narsinghpur, MP	1988
2		Tractor Financing in Raisen and Vidisha, MP	1989
3		Commercial Layer Poultry Development in Indore District, MP	1992
4		IRDP in Sagar District, Madhya Pradesh	1994
5		Rural Non Farm Sector in Ujjain district	2005
1	Maharashtra	Lift Irrigation Schemes in Ahmednagar District	1988
2		Well Irrigation in Aurangabad District	1991
3		Poultry Development in Pune District	1991
4		Grape Gardens in Nasik District	1993
5		Land Development in Kukkadi Project	1995
6		IRDP in Yavatmal District	1998
7		Farm Mechanisation in Ahmednagar district.	1999
8		Post Harvest Centres (pre cooling etc) for export of Grapes	2001
9		Rice Mills in Maharashtra	2003
10		Cold Storages in Maharastra	2004

11		Evaluation Study of MI Projects under RIDF	2005
12		Impact of Infrastructure on Agricultural Growth-Ahmednagar District, Maharashtra	2007
13		Commodity Specific Study on Mango	2009
1	Orissa	Betelvine Gardens in Puri District, Orissa	1989
2		Tractors in Sambalpur District, Orissa	1989
3		Dairy Development in Cuttack&Ganjam, Orissa	1992
4		Brackish Water Prawn Culture in Puri, Orissa	1994
5		Minor Irrigation in Sambalpur District, Orissa	1997
6		Shallow Tubewells inCuttak and Puri districts	2000
7		DRIP & PLI Training in Ganjam district.	2002
8		Group financing Under Farm mechanisation in Orissa	2003
9		Investment under RIDF in Rural Bridges	2004
10		SHG-Bank Linkage Programme in KBK Region in Orissa	2005
11		Impact of RIDF Investments in Orissa	2006
12		Commodity Specific Study on Cashewnut in Orissa	2007
13		District Rural Industries Project in Bargarh District	2008
14		Evaluation of Rural Entrepreneurship Development Programme	2009
1	Punjab & Haryana	Poultry Farming in Punjab	1987
2		Dairy Development in Karnal and Rohtak Districts	1987
3		Tractors in Haryana	1994
4		Grape Gardens in Hissar District , Haryana	1998
5		Inland Fisheries in Patiala and Bathinda, Punjab	2000
6		Financial Viability of Tractors in Punjab.	2001
7		RNFS in Ludhiana and Sangrur of Punjab.	2001
8		Water Conveyance System in Rewari & Mahendergargh Districts	2001
9		Coldstorage in Jalandhar, Ludhiana & Patiala in Punjab	2001
10		Dairy financing in Kurukshetra & Kaithal districts of Haryana	2002
11		Self Help Group in Karnal Gurgaon and Bhiwani district	2002
12		Poultry (Layer) in Sangur and Gurdaspur Districts in Punjab	2003
13		Tubewells in Bathinda, Hoshiapur and Ropar district of Punjab	2003
14		Agro Processing Units in Haryana	2003
15		Rural roads in Mukatsar district in Punjab	2003
16		Financing of Dairy Development (buffaloes) in Patiala and Sangur districts of Punjab	2004
17		Tractor Financing in Kaithal and Faridabad Districts of Haryana	2005
18		Impact assessment of RIDF Investments in Haryana	2006
19		CSS study on Sugarcane – Kurushetra and Yamunanagar districts- Haryana	2007
20		DRIP – An Evaluation Study in Ambala District of Haryana	2008
1	Rajasthan	Minor Irrigation Structures in Kherwara P.S., Udaipur District	1988
2		Tractors in Alwar District, Rajasthan	1991
3		Market Yard in Kekri - Ajmer District, Rajasthan	1991
4		Borewell in Jodhpur District, Rajasthan	1993
5		IRDP in Alwar District, Rajasthan	1995
6		Poultry in Ajmer District, Rajasthan	1995
7		Sprinkler Irrigation in Barmer District, Rajasthan	1997
8		Dairy Schemes in Bharatpur Districts	1999

9		Water Management Schemes in Jaipur Districts	2000
10		Minor Irrigation in Bikaner district	2001
11		Orange Cultivation in Jhalwar district	2002
12		Rural Non Farm Sector in Bhilwara District	2006
13		Poultry (Layers) in Ajmer District	2006
14		Cost Models Comparative Study for SHGs: MFIs v/s NABARD Model	2007
15		Commodity Specific Study - Groundnut	2007
16		District Rural Industries Project in Udaipur District	2008
1	Tamil Nadu	Poultry Development in Salem, TamilNadu	1988
2		Dugwell Irrigation in Tamil Nadu	1989
3		Tea Gardens in Nilgiris District, Tamil Nadu	1990
4		M I Investments under MAP in Tamil Nadu	1991
5		Jasmine Investments in Salem and Madurai Districts, Tamil Nadu	1992
6		Mini Dairy in Coimbatore & Periyar Districts, Tamil Nadu	1994
7		Marine Fisheries in Tamil Nadu	1998
8		Sericulture in Tamil Nadu	1999
9		IRDP in Tamil Nadu	2000
10		Modern Rice Mills in Tamil Nadu	2001
11		Coconut Development in Tamil Nadu	2002
12		MICP under KfW - NB VII in Ramnad & Trichy District	2002
13		District Rural Industries Project in Tirunelveli district	2003
14		Cold Storages in Tamil Nadu	2003
15		Rural Roads in Tamil Nadu	2003
16		Combine Harvesters in Tiruvallur and Salem Districts of Tamil Nadu	2005
17		Tea in Tamil Nadu: A Commodity Study in Nilgiris and Coimbatore Districts	2006
18		Comparative Cost Models for SHGs in Tamil Nadu – A Study in Villupuram District	2006
19		Cashew in Tamil Nadu – A Commodity Study in Cuddalore District	2007
1	Uttar Pradesh	Minor Irrigation Scheme in Jhansi District, UP	1988
2		Tractors in Western Uttar Pradesh	1992
3		Inland Fishery in Azamgarh & Deoria Districts, UP	1994
4		NFS in Moradabad District, Uttar Pradesh	1994
5		Saghan Mini Dairy, Allahabad District, UP	1996
6		Mushroom Cultivation in Dehradun District, U P	1997
7		Grape Gardens in Muzaffarnagar District, UP	1998
8		MI in Rae Bareilly District, Uttar Pradesh	1998
9		Poultry(Broilers) Farming in UP	2005
10		Impact Assessment of Investments under RIDF	2006
11		Commodity Specific Study - Cashew in Tamil Nadu (Cuddalore Dist.)	2007
12		REDP-Evaluation Study in Moradabad and Mirzapur Districts of U.P.	2009
1	Uttaranchal	RNFS Study in Udham Singh Nagar District of Uttaranchal	2006
1	West Bengal	Inland Fisheries Scheme in Nadia, West Bengal	1987
2		Betelvine Gardens in Midnapore, West Bengal	1989
3		Bullock and Bullock carts in Malda, West Bengal	1991
4		Poultry Farming in (Broiler) in Midnapur District, West Bengal	1999
5		MI Schemes in Birbhum District, West Bengal	2000
6		Floriculture in Midnapore District of West Bengal	2003

7	Modern Rice Mills and Mustard Oil mills in Bankura Nadia districts	2003
8	Impact Assessment of SCP and TSP in West Bengal	2005
9	Rural Roads under RIDF in West Bengal	2005
10	Rural Godowns in West Bengal	2006
11	Comparative Cost Study on Models of SHGs in West Bengal	2007
12	Commodity Specific Study on Mango	2008